CDT STP Request For Proposal

Request For Proposal **(**RFP**)**

RFP 21ITS0716

PART 1 – BIDDER INSTRUCTIONS

FOR

Renewables Portfolio Standard Database System (RPSD) Expansion Project– Implementation Services

June 15, 2022

Issued by:

STATE OF CALIFORNIA

California Public Utilities Commission California Public Utilities Commission, 505 Van Ness Avenue, San Francisco, CA 94102

Part 1 of the solicitation template contains the bidder and bidding instructions, proposal form instructions, solution requirements and instructions, and all other instructional/compliance information that the bidder must meet in order to be considered responsive and responsible to the solicitation.

Part 2 of the solicitation template contains all forms a bidder must complete and return with its Final Proposal, including the SOW, administrative forms, qualification forms, requirement responses, and all exhibits/attachments discussed in Part 1.

Disclaimer: The original version and any subsequent solicitation addenda released by the Procurement Official of this solicitation remain the official version. In the event of any inconsistency between the bidder's versions, articles, attachments, specifications or provisions (which constitute the Contract), the official State version of the solicitation in its entirety shall take precedence.

TABLE OF CONTENTS

1. INTRODUCTION 10

1.1. PURPOSE OF THIS REQUEST FOR PROPOSAL 10
1.2. BACKGROUND 10
1.3. TERM OF CONTRACT 11
1.4. CURRENT AND PROPOSED ENVIRONMENT 11
1.4.1. CURRENT ENVIRONMENT 12
1.4.2. PROPOSED ENVIRONMENT 13
1.5. AMERICANS WITH DISABILITIES ACT (ADA) 14

2. BIDDING INSTRUCTIONS 15

2.1. BIDDER ADMONITION 15
2.2. COMMUNICATIONS AND CONTACTS 16
2.2.1. PROCUREMENT OFFICER 16
2.2.2. QUESTIONS REGARDING THE SOLICITATION DOCUMENT 17
2.2.3. INTENT TO BID 18
2.2.4. BIDDERS' LIBRARY 18
2.2.5. CLOUD COMPUTING SERVICES 19
2.3. KEY ACTION DATES 20
2.4. RULES GOVERNING COMPETITION 22
2.4.1. IDENTIFICATION AND CLASSIFICATION OF SOLICITATION REQUIREMENTS 22
2.4.2. SOLICITATION DOCUMENTS 22
2.4.3. EXAMINATION OF THE WORK 23
2.4.4. EXCLUSION FOR CONFLICT OF INTEREST 24
2.4.5. CONFIDENTIALITY 24
2.4.6. ADDENDA 25
2.4.7. BIDDER'S COST 25
2.4.8. DISCOUNTS 25
2.4.9. SIGNATURE OF PROPOSAL 26
2.4.10. IRREVOCABLE OFFER 26
2.4.11. FALSE OR MISLEADING STATEMENTS 26
2.4.12. BONDS 27
2.5. BIDDING STEPS 27

2.5.1. COMPLIANCE PHASE 27
2.5.1.1. CONFIDENTIAL DISCUSSION WITH EACH BIDDER 28
2.5.1.2. SUBMISSION OF AMENDED PROPOSAL(S) 29
2.5.2. FINAL PHASE 29
2.5.3. WITHDRAWAL AND RESUBMISSION/MODIFICATION OF PROPOSALS 30
2.5.4. DISPOSITION OF PROPOSALS 30
2.6. PROTESTS 30
2.7. ALTERNATIVE PROTEST PROCESS 30
2.8. NEGOTIATIONS 30
3. ADMINISTRATIVE REQUIREMENTS 31
3.1. PRE-QUALIFIED VENDOR APPLICATION OF QUALIFICATION 32
3.2. ABILITY TO PERFORM 32
3.3. PRIMARY BIDDER 33
3.4. SUBCONTRACTORS 33
3.4.1. BIDDER DECLARATION FORM (M) 34
3.5. AMENDMENT 34
3.6. FINANCIAL RESPONSIBILITY INFORMATION 34
3.6.1. FINANCIAL STABILITY 34
3.7. INCORPORATION OF EVAQ REQUIREMENTS 35
3.8. GENERAL PROVISIONS 35
3.8.1. CLOUD COMPUTING - SOFTWARE AS A SERVICE 35
3.8.2. CLOUD COMPUTING SERVICES SPECIAL PROVISIONS 35
3.9. WORKERS' COMPENSATION/EMPLOYER'S LIABILITY (M) 36
3.10. ADMINISTRATIVE REQUIREMENTS DOCUMENT (M) 36
3.11. COVER LETTER (M) 36
3.12. CONFIDENTIALITY STATEMENT (M) 37
3.13. SOCIOECONOMIC PROGRAMS 37
3.13.1. BIDDER'S PREFERENCE AND INCENTIVE DECLARATION 38
3.13.2. DISABLED VETERAN BUSINESS ENTERPRISE (DVBE) PROGRAM 38
3.13.2.1. DVBE PARTICIPATION REQUIREMENT (M) 39
3.13.2.2. DVBE INCENTIVE (O) 40
3.13.3. SMALL BUSINESS PREFERENCE (O) 41
3.13.4. NON-SMALL BUSINESS SUBCONTRACTOR PREFERENCE (O) 41

3.13.5. COMMERCIALLY USEFUL FUNCTION (M) 42
3.14. PRODUCTIVE USE REQUIREMENTS 43
3.14.1. CUSTOMER IN-USE 44
3.14.2. HARDWARE/EQUIPMENT 46
3.14.3. RUSSIA-UKRAINE CONFLICT ECONOMIC SANCTIONS 46

4. PROPOSAL REQUIREMENTS 46
4.1. QUALIFICATION REQUIREMENTS 48
4.1.1. BIDDER QUALIFICATIONS (M) 48
4.1.2. BIDDER REFERENCES (M, MS) 50
4.1.3. STAFF QUALIFICATIONS (M or DS) 51
4.1.4. STAFF REFERENCES (M) 52
4.1.4.1. FULL-TIME/PART-TIME MONTH EQUIVALENTS DEFINITION 53
4.1.5. STATEMENT OF WORK (M) 53
4.2. SOLUTION REQUIREMENTS 54
4.2.1. FUNCTIONAL AND NON FUNCTIONAL REQUIREMENTS (M) 54

5. COST 55
5.1. COST WORKBOOK (M) 56
5.2. COST WORKBOOK INSTRUCTIONS 56
5.3. PROJECT PAYMENT TERMS 58
5.4. SALES TAX 58

6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS 58
6.1. PREPARATION 59
6.2. COMPLETION OF PROPOSALS 59
6.3. DELIVERY OF SUBMITTALS 59
6.3.1. FORMATTING 59
6.3.2. SOFT COPY 60
6.4. FINAL PROPOSAL FORMAT AND CONTENT 60
6.4.1. VOLUME 1: RESPONSE TO ADMINISTRATIVE REQUIREMENTS, TECHNICAL REQUIREMENTS AND LITERATURE 61
6.4.2. VOLUME 2: COST 62

7. EVALUATION 62
7.1. EVALUATION TEAM 63

7.2. EVALUATION STEPS 63
7.2.1. EVALUATION OF REQUIRED INFORMATION AND REQUIREMENTS 64
7.2.2. RECEIPT AND PRELIMINARY REVIEW 64
7.2.3. MANDATORY REQUIREMENTS EVALUATION 65
7.2.4. VALIDATION AGAINST REQUIREMENTS 65
7.3. FINAL PROPOSAL EVALUATION 66
7.3.1. ERRORS IN THE FINAL PROPOSAL 69
7.3.2. REJECTION OF PROPOSALS 70
7.3.3. ADMINISTRATIVE REQUIREMENTS EVALUATION 70
7.3.4. QUALIFICATION REQUIREMENTS EVALUATION 71
7.3.4.1. BIDDER QUALIFICATIONS 72
7.3.4.2. BIDDER REFERENCES 72
7.3.4.3. KEY STAFF QUALIFICATIONS 73
7.3.4.4. KEY STAFF REFERENCES 74
7.3.4.5. BIDDER AND STAFF REFERENCE CHECKS 75
7.3.5. SOLUTION REQUIREMENTS EVALUATION 75
7.3.5.1. FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS 76
7.3.5.2. DELIVERABLE EVALUATION (PASS/FAIL) 76
7.3.5.3. NARRATIVE RESPONSE REQUIREMENTS (MS) 76
7.3.6. CALCULATE BIDDER PROPOSAL NON-COST SCORE 83
7.3.7. COST EVALUATION 84
7.3.8. SOCIOECONOMIC PROGRAMS 87
7.3.8.1. TACPA PREFERENCE 87
7.3.8.2. SMALL BUSINESS PREFERENCE 88
7.3.8.3. DVBE INCENTIVE 90
7.3.9. BIDDER FINAL SCORE CALCULATION AND RANK DETERMINATION 91
7.3.10. SUBMISSION OF AMENDED FINAL PROPOSAL(S) 92
7.4. NEGOTIATIONS 92
7.4.1. PROCEEDING TO NEGOTIATIONS 93
7.4.2. NEGOTIATION INVITATION 93
7.4.3. BEST AND FINAL OFFER SUBMISSION (BAFO) 93
7.4.4. EVALUATION OF BAFO SUBMISSION 94
7.4.5. SELECTION 95
7.4.6. DEBRIEFING 95

8. INFORMATIONAL ATTACHMENTS 95

Part 2 97

ATTACHMENTS 97

ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK 97

ATTACHMENT 2: INTENT TO BID 270

ATTACHMENT 3: CONFIDENTIALITY STATEMENT 272

ATTACHMENT 4: RESPONSE TO ADMINISTRATIVE REQUIREMENTS 274

ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105 276

ATTACHMENT 6: WORKERS' COMPENSATION CERTIFICATION 277

ATTACHMENT 7: DVBE DECLARATIONS 278

ATTACHMENT 8: BIDDING PREFERENCES AND INCENTIVES 279

ATTACHMENT 9: COMMERCIALLY USEFUL FUNCTION (CUF) CERTIFICATION 282

ATTACHMENT 10: TACPA PREFERENCE REQUEST FORMS 284

ATTACHMENT 11: BIDDER QUALIFICATIONS FORM - INSTRUCTIONS 285

ATTACHMENT 12: BIDDER QUALIFICATIONS FORM 288

ATTACHMENT 13: BIDDER REFERENCE FORM 293

ATTACHMENT 14: KEY STAFF QUALIFICATIONS FORM – INSTRUCTIONS 297

ATTACHMENT 14.1: Project Manager - QUALIFICATIONS FORM 299

ATTACHMENT 14.2: Project Manager - REFERENCE FORM 303

ATTACHMENT 14.3: Web Application Development Lead - QUALIFICATIONS FORM 306

ATTACHMENT 14.4: Web Application Development Lead - REFERENCE FORM 312

ATTACHMENT 14.5: Back-End Lead - QUALIFICATIONS FORM 315

ATTACHMENT 14.6: Back-End Lead - REFERENCE FORM 321

ATTACHMENT 14.7: Testing/QA Lead - QUALIFICATIONS FORM 324

ATTACHMENT 14.8: Testing/QA Lead - REFERENCE FORM 330

ATTACHMENT 15: TEMPLATE FOR QUESTION SUBMITTAL 333

ATTACHMENT 16: SOLICITATION SUBMISSION CHECKLIST 335

ATTACHMENT 17: NARRATIVE RESPONSE 337

EXHIBITS 338

EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION

REQUIREMENTS 338
EXHIBIT B: DELIVERABLES TABLE 340
EXHIBIT C: COST WORKSHEETS 344
EXHIBIT D: DELIVERABLE EXPECTATION DOCUMENT (DED) 345
EXHIBIT E: DELIVERABLE ACCEPTANCE DOCUMENT (DAD) 347
EXHIBIT F: KEY STAFF CHANGE ORDER REQUEST FORM 349
EXHIBIT G: KEY STAFF QUALIFICATIONS FORM 351
EXHIBIT H: KEY STAFF QUALIFICATIONS REFERENCE FORM 354
EXHIBIT I: WORK AUTHORIZATION (WA) 357
EXHIBIT J: GLOSSARY OF TERMS 360

RFP

PART 1 – BIDDER INSTRUCTIONS

1. INTRODUCTION

This solicitation is being conducted under the authority of California Department of Technology (CDT) pursuant to Public Contract Code (PCC) §6611 et seq. The format that bid information is to be submitted and the material to be included therein follows. This solicitation also addresses the requirements that Bidders must meet to be eligible for consideration, as well as addressing Bidders' responsibilities before and after award.

1.1. PURPOSE OF THIS REQUEST FOR PROPOSAL

The purpose of this Request For Proposal (hereafter referred to as "solicitation") is to obtain proposals from qualified Bidders to provide California Public Utilities Commission and the State of California (hereafter referred to as "State") with implementation and Maintenance and Operations (M&O) of the Renewables Portfolio Standard Database Project (hereafter referred to as "RPSD").

The Contract Award, if made, will be to a single Bidder in accordance with the methodology defined in SECTION 7. EVALUATION.

1.2. BACKGROUND

California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. Established in 2002 and subsequently revised (established through Senate Bill 1078, accelerated in 2006 under Senate Bill 107, expanded in 2011 under Senate Bill 2(1x), enhanced in 2015 by Senate Bill 350 and Senate Bill 697, and accelerated and increased in 2018 by Senate Bill 100), the RPS program requires investor-owned utilities (IOUs), publicly owned utilities (POUs), electric service providers (ESPs), and community choice aggregators (CCAs) to increase procurement from eligible renewable energy resources to 60% of total procurement by 2030 with interim targets of 40% by December 31, 2024, and 52% by December 31, 2027 (refer to Public Utilities Code 399.11- 399.32).

The California Public Utilities Commission (CPUC) has oversight authority for IOUs, CCAs, and ESPs whereas the California Energy Commission (CEC) has oversight authority for POUs.

The creation of the RPS Database (RPSD) was initiated in order to store and track project information collected from the three (3) large IOUs. The RPS Program has several reporting requirements that facilitate the need for the large IOUs to submit data to CPUC staff. The RPSD is also intended to simplify the IOU submission process and ensure completeness and accuracy of the reported project data which can change monthly. The RPSD enables CPUC staff to respond to an increasing number of internal and external stakeholder data requests that are used to track California's progress toward renewable energy goals, renewable procurement decisions, and integrated resource planning.

Following the enactment of Senate Bill 697 and Senate Bill 350 in 2015, new RPS tracking, compliance, and reporting requirements created the need for additional functionality and user interfaces.

The purpose of this ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK is to hire an implementation Contractor to replicate and expand the functionalities of the existing RPSD System as per the documented SECTION 7. Solution Requirements.

1.3. TERM OF CONTRACT

Effective upon approval of the California Department of Technology (CDT), Statewide Technology Procurement (STP), defined as the Effective Date, the term of the Contract is two and one half (2 1/2) years, with two (2) optional one (1) year extensions for a total maximum Contract term of four and one half (4 1/2) years. The CPUC at its sole discretion, will determine if an optional extension year will be exercised at the rates specified in EXHIBIT C: COST WORKSHEETS.

The initial period of performance for this Contract shall be from Contract execution through deployment, which is expected to last a maximum of one and one half (1 1/2) years, plus one (1) year of warranty and one (1) year of M&O after acceptance, running concurrently.

The Contractor shall not be authorized to commence services described in this Contract prior to the Contract Effective Date. Any performance of services by the Contractor commenced prior to the Effective Date shall be at no cost to the State.

1.4. CURRENT AND PROPOSED ENVIRONMENT

1.4.1. CURRENT ENVIRONMENT

The current RPSD System is hosted in a CPUC owned Amazon Web Services (AWS) GovCloud account and is operated by a Contractor who developed the current RPSD System. The current RPSD System consists of a database, web portal, a data transformation batch process, database interface for CPUC Energy Division staff via a Tableau client, and database access for an external python program.

The current System architecture diagram is provided in the document repository. Below is a brief description of each component:

1.4.1.1 Database

The database is based on an AWS Relational Database Service (RDS) supported by a PostgreSQL database engine (v 11.x). It has fifty (50) GB storage capacity.

1.4.1.2 Web Portal

Web portal was developed using Python/Django web framework, Cascading Style Sheet (CSS), JavaScript, HyperText Markup Language (HTML), and Bootstrap. The web portal is run as a docker container and has been configured:

- To securely access a file system that is based on an AWS Simple Storage Service (AWS S3);
- To securely access the RDS based database;
- To interface with CPUC email server for sending System generated emails; and
- For load balance and for failover with a minimum of two (2) web servers scaling up one at a time to reach a maximum of four (4) web servers and to scale down to two (2) web servers.

1.4.1.3 Batch Process for Data Transformation

A stored procedure and a shell script were created to run a data transformation program which transforms the uploaded data into the required data formats defined by the database interface tables. The transformed and accumulated data will be used by the CPUC Energy Division Staff and by the data extract program.

1.4.1.4 CPUC Energy Division Staff Interface to the Database

This requires the following:

- CPUC firewall configuration to allow client desktops to access the AWS environment
- Grant access permissions to the required database tables for CPUC Energy Division staff to conduct RPS data analysis and reporting

1.4.1.5 Database Interface for an External Program

A custom written Python program accesses the RPS database to extract the required data and populate a CPUC Energy Division data warehouse. This custom Python program is configured to access the RPS database, and the database login used by the Python program has special grants to access the required database tables.

1.4.2. PROPOSED ENVIRONMENT

This section presents an overview of the RPSD System and does not specify any detailed technical requirements.

The RPSD System will be custom developed by building upon a copy of the current RPSD System and adding the required additional components and functionalities. A proposed to-be architecture diagram is provided in the RPSD Bidder's Library.

Brief description of components and functionalities to be added:

- PostGIS database component for geospatial data storage and retrieval
- Public website to be built as a separate website from the web portal and is linked to https://www.cpuc.ca.gov/rps web page
- Web portal interfaces to open source mapping software and base maps to

create data visualizations for shapefiles and RPS project locations

- Scope expansion of the web portal for a wider user base of Retail Sellers
- Scope expansion of the web portal for additional data file submission for reporting and tracking of RPS procurement plans, RPS compliance reports, and geospatial shapefiles
- Scope expansion of the web portal to provide capability for potential web portal users to request an account/login
- Hosting of interactive Tableau workbooks in Tableau Public server and interfacing them in the web pages of the web portal and the public website
- Batch processes and scripts for data transformation, data refresh, and data upload to Tableau Public
- Proposed use of HighCharts software/JavaScript libraries or similar, for additional data visualizations as seen on the referenced DGSTATS website

References:

https://www.highcharts.com/

https://www.californiadgstats.ca.gov/

1.5. AMERICANS WITH DISABILITIES ACT (ADA)

To comply with the nondiscrimination requirements of ADA, it is the policy of the State of California to make every effort to ensure that its programs, activities, and services are available to all persons, including persons with disabilities.

For persons with a disability needing a reasonable accommodation to participate in the procurement process or for persons having questions regarding reasonable accommodations of the procurement process, you may contact the Procurement Officer identified in SECTION 2.2.1. PROCUREMENT OFFICER. You may also contact the State of California at the numbers listed below.

Important: To ensure that we can meet your need, it is best that we receive your request for reasonable accommodations at least 10 working days before the scheduled event, e.g., meeting, conference, workshop, etc., or deadline due-date for procurement documents.

The California Relay Service Telephone Numbers are:

TTY/VCO/HCO to Voice	**English** **Spanish**	**1-800-735-2929** **1-800-855-3000**
Voice to TTY/VCO/HCO	**English** **Spanish**	**1-800-735-2922** **1-800-855-3000**
From or to Speech-to-Speech	**English & Spanish**	**1-800-854-7784**

2. BIDDING INSTRUCTIONS

2.1. BIDDER ADMONITION

This procurement will follow a phased approach designed to increase the likelihood that Final Proposals will be received without disqualifying defects. The additional steps:

- Ensure that the bidder clearly understand the State's requirements before attempting to develop its Final Proposal
- Ensure that the State clearly understands what each bidder intends to propose before those proposals are finalized
- Provide an opportunity for the State and each bidder to discuss weaknesses or potentially unacceptable elements of a bidder's proposal and gives the bidder an opportunity to modify its proposal to correct such problems

Specific information regarding such steps is found in SECTION 2.5. BIDDING STEPS and SECTION 7. EVALUATION, of the solicitation.

The bidder should refer to SECTION 2.5. BIDDING STEPS to understand the phases applicable to this solicitation. It is the bidder's responsibility to:

1. Carefully read the entire solicitation.
2. Ask appropriate questions in a timely manner, if clarification is necessary.
3. Submit proposal by the required dates and times.
4. Make sure that all procedures and requirements of the solicitation are accurately followed and appropriately addressed.
5. Carefully re-read the entire solicitation before submitting a Final Proposal.

2.2. COMMUNICATIONS AND CONTACTS

The State uses an online procurement system known as *Cal eProcure* to communicate with prospective bidders and suppliers. Information and ongoing communications for this solicitation will be posted by the State on the *Cal eProcure* website, www.caleprocure.com.

Only questions submitted in writing and answered in writing by the Procurement Official shall be binding and official. Written questions must be submitted by email to the Procurement Officer identified in SECTION 2.2.1. PROCUREMENT OFFICER using ATTACHMENT 15: TEMPLATE FOR QUESTION SUBMITTAL. All written questions submitted by the deadline specified in SECTION 2.3. KEY ACTION DATES will be responded to at the same time with all questions and answers posted to *Cal eProcure* in the form of a question and answer set.

Oral communications by Agency/state entity officers and employees concerning this solicitation shall not be binding on the State and shall in no way excuse the bidder of any obligations set forth in this solicitation.

2.2.1. PROCUREMENT OFFICER

The Procurement Officer is the State's designated authorized representative regarding this procurement.

Bidders are directed to communicate, submit questions, deliver proposals, and submit all other correspondence regarding this procurement to the Procurement Officer at the email address below.

David Sanchez, Procurement Officer
Phone: 916 460-9815 Email: david.sanchez@state.ca.gov

2.2.2. QUESTIONS REGARDING THE SOLICITATION DOCUMENT

Bidders requiring clarification of the intent, terms and conditions, content of this solicitation, or on procedural matters regarding the competitive bid process may request clarification by submitting questions using ATTACHMENT 15: TEMPLATE FOR QUESTION SUBMITTAL in an email (using the solicitation identification information from the solicitation title page) to the Procurement Officer listed in SECTION 2.2.1. PROCUREMENT OFFICER. To ensure a response, questions must be received in writing by the scheduled date(s) specified in SECTION 2.3. KEY ACTION DATES. Question and answer sets will be provided to all bidders without identifying the submitters. At the sole discretion of the State, questions may be paraphrased by the State for clarity.

Only questions submitted in writing and answered in writing by the Procurement Officer shall be binding and official. Written questions must be submitted by email to the Procurement Officer identified in SECTION 2.2.1. PROCUREMENT OFFICER, using ATTACHMENT 15: TEMPLATE FOR QUESTION SUBMITTAL. All written questions submitted by the deadline specified in SECTION 2.3. KEY ACTION DATES, will be responded to at the same time with all questions and answers posted to Cal eProcure in the form of a question and answer set.

If a bidder who desires clarification or further information on the content of the solicitation, but whose questions relate to the proprietary aspect of its proposal and disclosure exposes its proposal to other bidders, the question may be submitted using the same criteria above with the notation, “CONFIDENTIAL.” The bidder must explain why the question is sensitive in nature. If the State concurs that the disclosure of the question or answer would expose the proprietary nature of the proposal, the question will be answered and both the question and answer will be confidentially maintained. If the State does not concur with the proprietary aspect of the question, the question and answer will not be confidentially maintained and the bidder will be so notified.

2.2.3. INTENT TO BID

Bidders that want to participate in the solicitation must submit a completed SECTION 2.2.3. INTENT TO BID by the date specified in SECTION 2.3. KEY ACTION DATES.

This document shall be emailed to the Procurement Officer identified in SECTION 2.2.1. PROCUREMENT OFFICER. Only those Bidders acknowledging interest in this solicitation will receive invitations and correspondence applicable to the solicitation (e.g., scheduling dates for confidential discussions, Bidders library, CDT cloud services, meetings, etc.) throughout this procurement. Correspondence to a Bidder regarding this solicitation will only be given to the Bidder's designated contact person.

It shall be the Bidder's responsibility to immediately notify the Procurement Officer identified in SECTION 2.2.1. PROCUREMENT OFFICER, in writing, regarding any revision to the contact person information by the proposal submission date. The State shall not be responsible for proposal correspondence not received by the Bidder if the Bidder fails to notify the State, in writing, about any change pertaining to the designated contact person.

A Bidder must notify the Procurement Officer whenever its intent to bid changes or whenever there is a change in the Bidder's designated contact information.

2.2.4. BIDDERS' LIBRARY

The State will make available a Bidders' Library containing reference and supporting documentation that the Bidder may review and use to prepare its Final Proposal. The Bidder is encouraged to review the information in the Bidders' Library to gain a thorough understanding of the Renewables Portfolio Standard Database System (RPSD) Expansion Project– Implementation Services. It is each Bidder's responsibility to check for updates to the Bidders' Library.

It is the Bidder's responsibility to contact the Procurement Officer SECTION 2.2.1. PROCUREMENT OFFICER for a User ID, password, and URL. Bidders are not allowed to share or provide this information to anyone.

To obtain Bidders' Library access, Bidders must sign and submit the ATTACHMENT 2: INTENT TO BID to the Procurement Officer listed in SECTION 2.2.1. PROCUREMENT OFFICER. It is the Bidder's responsibility to provide the Procurement Officer the required documentation to obtain the User ID, password, and URL for access to the Bidders' Library. The Bidder must identify a Bidders' Library single point of contact, email, street address, and phone number. A User ID, password and URL will be emailed back to the Bidder's single point of contact within three (3) days after receipt of the SECTION 2.2.3. INTENT TO BID.

The State will provide updated information as it becomes available during the course of the solicitation. The State will ensure the latest documents are provided in the Bidders' Library.

2.2.5. CLOUD COMPUTING SERVICES

Per the State's Cloud Computing Policy, whenever feasible, Agencies/state entities will utilize the CalCloud services provided by CDT. These service options include Software-as-a-Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). For this RFP, CalCloud services provided by CDT are not a viable option due to various requirements identified in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS. Vendors are required to host their proposed solution in a manner that complies with the requirements identified in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS and if applicable, the Cloud Computing Services Special Provisions for Software as a Service (SaaS) or Cloud Computing Services Special Provisions of IaaS or PaaS.

2.3. KEY ACTION DATES

Table 2-1: Key Action Dates provides the key action dates and times by which actions must be taken or completed. If the State finds it necessary to change these dates or times, it will be accomplished via an addendum to this solicitation with the exception of dates listed after the bidder's submission of Final Proposal. Dates listed after the bidder's submission of Final Proposal are estimated and may be adjusted without addendum to this solicitation. All times listed are in Pacific Time (PT).

Table 2-1: Key Action Dates (KAD)

KEY ACTION DATES		
Item	**Action**	**Date and Time**
1	Release of Solicitation	June 15, 2022
2	Last day to submit ATTACHMENT 2: INTENT TO BID and ATTACHMENT 3: CONFIDENTIALITY STATEMENT (signed)	June 21, 2022
3	Last day to submit written questions using Attachment 1	July 1, 2022, 12:00 p.m. PT
4	State's response to bidder's questions and release of potential addendum	July 8, 2022

KEY ACTION DATES		
Item	**Action**	**Date and Time**
5	Last day to submit Final Proposal	July 22, 2022, 2:00 p.m., PT
6	Evaluation Period[1]	August 1, 2022 - August 12, 2022
7	Confidential Negotiations with Bidder(s)[1]	August 19, 2022
8	Best and Final Offer Submission[1]	August 29, 2022
9	Notification of Award[1]	September 6, 2022
10	Contract Execution[1]	September 21, 2022
11	Project Start Date[1]	September 21, 2022

[1] All dates after submission of Final proposal are approximate and may be adjusted as conditions indicate without addendum to this solicitation.

2.4. RULES GOVERNING COMPETITION

This solicitation, the evaluation of responses, and the award of any resultant Contract shall be made in conformance with the provisions set forth in Public Contract Code (PCC) 6611 as they relate to the procurement of IT goods and services by public bodies in the State of California.

2.4.1. IDENTIFICATION AND CLASSIFICATION OF SOLICITATION REQUIREMENTS

The State has established certain requirements with respect to proposals to be submitted by prospective Contractors. The use of “shall,” “must,” or “will” (except to indicate simple futurity) in the solicitation indicates a requirement or condition which is mandatory.

A deviation of any non-negotiable requirement identified in SECTION 2.8. NEGOTIATIONS, will disqualify a vendor from participating in Negotiations and Contract Award.

The words “should” or “may” in the solicitation indicate desirable attributes or conditions, but are non-mandatory in nature.

2.4.2. SOLICITATION DOCUMENTS

This solicitation document includes, in addition to an explanation of the State’s requirements which must be met, instructions which prescribe the format and content of proposals to be submitted and the model of the Contract to be executed between the State and the successful bidder.

If a bidder discovers any ambiguity, conflict, discrepancy, omission, or other error in this solicitation document, the bidder shall immediately notify the Procurement Official identified in SECTION 2.2.1. PROCUREMENT OFFICER, of such error in writing and request clarification or modification of the document.

Modifications will be made by addenda issued pursuant to SECTION 2.4.6. ADDENDA. Such modifications shall be given by written notice to all parties who have identified themselves as bidders to the Procurement Official without divulging the source of the request. Insofar as practicable, the State will give such notices to other interested parties, but the State shall not be responsible therefore.

If the solicitation document contains an error known to the bidder, or an error that reasonably should have been known, the bidder shall bid at its own risk. If the bidder fails to notify the State of the error prior to the date fixed for submission of proposals, and is awarded the Contract, the bidder shall not be entitled to additional compensation or time by reason of the error or its later correction.

2.4.3. EXAMINATION OF THE WORK

The bidder should carefully examine the entire solicitation document and any addenda thereto, and all related materials and data referenced in the solicitation document or otherwise available to the bidder, and should become fully aware of the nature and location of the work, the quantities of the work, and the conditions to be encountered in performing the work. Specific conditions to be examined may be listed in SECTION 3. ADMINISTRATIVE REQUIREMENTS and/or SECTION 4. PROPOSAL REQUIREMENTS.

2.4.4. EXCLUSION FOR CONFLICT OF INTEREST

No consultant shall be paid out of State funds for developing recommendations on the acquisition of information technology (IT) products or services or assisting in the preparation of the project approval lifecycle documents (stages 2, 3, or 4) or feasibility study, while in effect, if that consultant is to be a source of such acquisition or could otherwise directly and/or materially benefit from State adoption of such recommendations or the course of action recommended in the project approval lifecycle documents (stages 2, 3, or 4) or feasibility study. Further, no consultant shall be paid out of State funds for developing recommendations on the disposal of State surplus IT products if that consultant would directly and/or materially benefit from State adoption of such recommendations.

A consultant shall not be eligible to serve as the Prime Contractor or subcontractor pursuant to this solicitation if the Contractor/subcontractor is currently working on the solicitation in an Independent Verification and Validation (IV & V) role.

2.4.5. CONFIDENTIALITY

Bidder material becomes public only after the notice of Intent to Award is released. If material marked “confidential,” “proprietary,” or “trade secret” is requested pursuant to the Public Records Act, the State will make an independent assessment whether it is exempt from disclosure. If the State disagrees with the bidder, the State will notify the bidder and give them a reasonable opportunity to justify their position or obtain a court order protecting the material from disclosure.

The bidder should be aware that marking a document “confidential” or “proprietary” in a Final Proposal may exclude it from consideration for award and will not keep that document from being released after notice of award as part of the public record, unless a court has ordered the State not to release the document. The content of all working papers and discussions relating to the bidder’s proposal shall be held in confidence indefinitely, unless the public interest is best served by an item’s disclosure because of its direct pertinence to a decision, agreement or the evaluation of the proposal.

Any disclosure of confidential information by the bidder is a basis for rejecting the bidder's proposal and ruling the bidder ineligible to further participate. Any disclosure of confidential information by a State employee is a basis for disciplinary action, including dismissal from State employment, as provided by Government Code §19570 et seq. Total confidentiality is paramount; it cannot be over emphasized.

2.4.6. ADDENDA

The State may modify the solicitation at any time prior to submission of Final Proposal by issuing an addendum. Addenda will be numbered consecutively.

If a bidder determines that an addendum unnecessarily restricts its ability to bid, the bidder is allowed five (5) business days to submit written questions regarding the addendum according to the instructions contained in SECTION 2.2.2. QUESTIONS REGARDING THE SOLICITATION DOCUMENT.

2.4.7. BIDDER'S COST

Costs for developing proposals are the responsibility entirely of the bidder and shall not be chargeable to the State.

2.4.8. DISCOUNTS

In connection with any discount offered, except when a provision is made for a testing period preceding acceptance by the State, time will be computed from the date of delivery of the supplies or equipment as specified, or from date correct invoices are received in the office specified by the State if the latter date is later than the date of delivery. When a provision is made for a testing period preceding acceptance by the State, the date of delivery shall mean the date the supplies or equipment are accepted by the State during the specified testing period. Payment is deemed made, for the purpose of earning the discount, on the date of mailing the State warrant or check.

Cash discounts offered by bidders for the prompt payment of invoices will not be considered in evaluating offers for award purposes; however, all offered discounts will be taken if the payment is made within the discount period, even though not considered in the evaluation of offers.

2.4.9. SIGNATURE OF PROPOSAL

A cover letter shall be considered an integral part of the Final Proposal and any proposal form requiring signature, must be signed by an individual who is authorized to bind the bidding firm contractually. The signature block must indicate the title or position that the individual holds in the firm. An unsigned Final Proposal may be rejected.

2.4.10. IRREVOCABLE OFFER

A bidder's Final Proposal is an irrevocable offer for 120 days following the scheduled date for submission of Final Proposal specified in SECTION 2.3. KEY ACTION DATES. A bidder may extend the offer in the event of a delay of Contract award.

2.4.11. FALSE OR MISLEADING STATEMENTS

Proposals which contain false or misleading statements, or which provide references that do not support an attribute or condition claimed by the bidder, may be rejected. If, in the opinion of the State, such information was intended to mislead the State in its evaluation of the proposal, and the attribute, condition, or capability is a requirement of this solicitation document, it will be the basis for rejection of the bidder's proposal.

2.4.12. BONDS

The State reserves the right to require a performance bond or other security document as specified in the solicitation from the bidder in an amount not to exceed the amount of the Contract. In the event the State requires a surety bond that has not been expressly required by the solicitation, the State will reimburse the bidder as an addition to the purchase price in an amount not exceeding the standard premium on such bond.

2.5. BIDDING STEPS

The procurement process requires a mandatory Final Proposal phase consisting of a proposal submission. The procurement process may require multiple types of steps or compliance phases, as specified in the RFP. Refer to SECTION 2.3. KEY ACTION DATES to determine the applicable phases and mandatory or optional steps included in this solicitation.

At any point during the procurement process, the State reserves the right to add a compliance phase to the solicitation.

2.5.1. COMPLIANCE PHASE

The State reserves the right to hold a compliance phase prior to contract award. The compliance phase is an iterative, conversational mode of proposal and Contract development. It requires the State, working together in confidence with each Bidder, to assess and discuss the viability and effectiveness of the Bidder's proposed methods of meeting the State's needs as reflected in the solicitation. It is a departure from the rigid "either accept or reject" philosophy of traditional competitive bidding, yet it is highly competitive in nature. It facilitates the correction of deviations before they become detrimental to the bid. The compliance phase proposals may include requests for clarification of any aspect of the Bidder's proposal to address the correction of deviations.

The additional compliance phase step(s) will (1) ensure that the Bidder clearly understands the State's requirements; (2) ensure that the State clearly understands what each Bidder is proposing; and (3) give the State and each Bidder the opportunity to discuss weaknesses or potentially unacceptable elements of a Bidder's proposal and give the Bidder the opportunity to modify their proposal to correct such problems.

The Bidder is strongly encouraged to follow the scheduled steps of this procurement document in order to increase the chance of submitting a compliant Final Proposal. Costs submitted in any submission other than as stated in SECTION 6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS may preclude the Bidder from continuing in the process.

2.5.1.1. CONFIDENTIAL DISCUSSION WITH EACH BIDDER

In accordance with the discussion agenda, the State may meet with each Bidder for the purpose of discussing the proposal(s) in detail. The Bidder may bring to the discussion those persons who may be required to answer questions or commit to changes. As the first order of business, the Bidder may be asked to give a short proposal overview presentation. To the maximum extent practical, the Bidder will address the concerns of the State, as expressed in the discussion agenda, and should be prepared to answer any questions that may arise as a result of the presentation. The participants will then proceed to discuss each of the agenda items.

The State will not make counter proposals to a Bidder's proposed solution to the solicitation document requirements. The State will only identify its concerns, ask for clarification, and express its reservations if a particular requirement of the solicitation document is not, in the opinion of the State, appropriately satisfied. The primary purpose of this discussion is to ensure that the Bidder's Final Proposal will be responsive.

2.5.1.2. SUBMISSION OF AMENDED PROPOSAL(S)

If, at the conclusion of the confidential discussion, the State determines that required changes can only be fully confirmed through the submission of an amended proposal(s), the State may require either the submission of an addendum to the Bidder's preliminary proposal(s) consisting only of those pages that were in doubt, or the submission of a complete resubmittal.

The Bidder will be notified of deviations discovered in these submittals as well. The State will not provide any warranty that all deviations have been detected and that such notification will not preclude rejection of the Final Proposal if such deviations are later found.

2.5.2. FINAL PHASE

The final phase consists of a Final Proposal (Mandatory) and, if requested by the State, a Best and Final Offer (BAFO).

The purpose of the final phase is to obtain proposals that are responsive in every respect. The Final Proposal is a mandatory step for all bidders.

The Final Proposal must be complete, and include all cost information, required signatures, contract changes issued by the State via an addendum and corrections made to those defects noted by the State in its review of the proposal, if any. Cost as identified in SECTION 6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS must be submitted under a separate, sealed cover. Bidders that submitted Final Proposals meeting the criteria identified in SECTION 2.8. NEGOTIATIONS, will be eligible to receive an invitation to negotiate with the State.

The State, at its sole discretion, may request a BAFO from those Bidders that participated in the Negotiation Process as identified in SECTION 7.4. NEGOTIATIONS

2.5.3. WITHDRAWAL AND RESUBMISSION/MODIFICATION OF PROPOSALS

A bidder may withdraw its Final Proposal at any time prior to the Final Proposal submission date and time specified in SECTION 2.3. KEY ACTION DATES, by submitting a written notification of withdrawal signed by an authorized representative of the bidder in accordance with SECTION 2.4.9. SIGNATURE OF PROPOSAL. The bidder may thereafter submit a new or modified proposal prior to the respective proposal submission date and time specified in SECTION 2.3. KEY ACTION DATES. Modification offered in any other manner, oral or written, will not be considered. Other than as allowed by law, Final Proposals cannot be changed or withdrawn after the deadline date and time designated for receipt, except as provided in the solicitation.

2.5.4. DISPOSITION OF PROPOSALS

All materials submitted in response to this solicitation will become the property of the State of California. At a minimum, the materials submitted will become a public record after the Notification of Award.

2.6. PROTESTS

This solicitation is being conducted under (PCC) §6611 et seq; protests are not applicable to this solicitation.

2.7. ALTERNATIVE PROTEST PROCESS

This solicitation is being conducted under (PCC) §6611 et seq; protests are not applicable to this solicitation.

2.8. NEGOTIATIONS

The State will conduct negotiations under PCC §6611. The purpose of the negotiation process is to maximize the State's ability to obtain a value effective solution.

Negotiated items will be determined by the State after final proposals are evaluated. Any deviation must be resolved to the State's satisfaction during negotiations and corrected in the Bidder's BAFO, if requested.

3. ADMINISTRATIVE REQUIREMENTS

ADMINISTRATIVE REQUIREMENTS contains the mandatory administrative requirements that must be met in order to be considered responsive to this solicitation. Most of the administrative bidding requirements for this solicitation are being processed through the electronic Vendor Application of Qualifications (eVAQ). Please refer to SECTION 3.1. PRE-QUALIFIED VENDOR APPLICATION OF QUALIFICATION for more information.

Unless designated otherwise, all of the requirements in this section are mandatory. The documents that must be submitted with the bidder's Final Proposal are noted as "Mandatory" or "(M)" in this section.

The administrative requirements listed in this section are denoted as follows:

1. (M) – All sections labeled as "Mandatory" or "M" are not negotiable. To be considered responsive and responsible to these requirements, all requirements identified as (M) must be responded to. A "fail" in a mandatory section will result in a proposal being deemed non-responsive and, therefore, will be disqualified. Failure to respond to any mandatory requirements shall result in disqualification of the proposal. The responses will be evaluated in accordance with SECTION 7. EVALUATION.
2. (O) – All sections labeled as "Optional" or "O" are not required to be offered by the bidder in order to be responsive to the solicitation requirements. A bidder may choose whether to meet administrative requirements labeled as (O) such as those relating to preference points. However, if a bidder offers any of these (O) requirements, the bidder must meet the minimum requirements as stated in the section. The State will review responses to optional requirements and apply points, if applicable, per criteria stated in SECTION 7. EVALUATION.

3.1. PRE-QUALIFIED VENDOR APPLICATION OF QUALIFICATION

The State's eVAQ **is an external process to this solicitation**. Vendors will be required to have an approved application on file and be deemed a Pre-qualified Vendor prior to the Key Action Date for the Last day to submit Final Proposal (refer to SECTION 2.3. KEY ACTION DATES). All questions related to the eVAQ should be addressed to the Procurement Official. The intent of the pre-qualification is to process as much of the administrative requirements required to do business in the State of California in advance to streamline the solicitation process. The application can be accessed at https://cadtprod.service-now.com/vendor (eVAQ public facing site). If your firm is new to the eVAQ process, account registration is necessary and is free of charge.

3.2. ABILITY TO PERFORM

Prior to award of the Contract, the State must be assured that the Bidder selected has all of the resources to successfully perform under the Contract. This includes, but is not limited to, personnel in the numbers and with the skills required; equipment of appropriate type and in sufficient quantity; financial resources sufficient to complete performance under the Contract; and experience in similar endeavors. If, during the evaluation process, the State is unable to assure itself of the Bidder's ability to perform under the Contract if awarded, the State has the option of requesting from the Bidder any information that the State deems necessary to determine the Bidder's ability. If such information is required, the Bidder will be so notified and will be permitted five (5) state business days to submit the information requested in writing. Examples of the type of financial responsibility information requested may include annual reports and current audited balance sheets for the Bidder's firm.

3.3. PRIMARY BIDDER

An award, if made, will be to a primary bidder. The awarded primary bidder will be responsible for successful performance of all subcontractors and support services offered in response to this solicitation. All State policies, guidelines, and requirements that apply to the primary bidder also apply to subcontractors, as applicable to the products and services they provide and to their role as a subcontractor. Furthermore, the State will consider the primary bidder to be the sole point of contact regarding contractual matters for the term of the resulting Contract. The bidder shall not assign financial documents to a third-party without prior written approval by the State, and an amendment to the resulting Contract.

3.4. SUBCONTRACTORS

It is the bidder's responsibility to ensure any subcontractor that the bidder chooses to use in fulfilling the requirements of this solicitation, and which is expected to receive more than ten percent (10%) of the value of the Contract, also meets all administrative and bid requirements of the solicitation, as applicable to the services provided by the subcontractor.

Nothing contained in the resulting Contract shall create any relationship between the State and any subcontractors, and no subcontract shall relieve the bidder of its responsibilities and obligations. The bidder is fully responsible to the State for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by them.

The Contractor shall not change subcontractor(s) and/or DVBE subcontractor(s) if such changes conflict with the work to be performed under this Contract. For DVBE subcontractor changes, the Contractor shall utilize another DVBE subcontractor. The State recognizes that changes to subcontractor(s) may be necessary and in the best interests of the State, however, advance notification of a contemplated change and the reasons for such change must be made to the State no less than seven (7) business days prior to the existing subcontractor's termination. If this should occur, the Contractor should be aware that the State Contract administrator or designee must approve any changes to the subcontractor(s) prior to the termination of the existing subcontractor(s). This also includes any changes made between submittal of the Final Proposal and actual start of the Contract.

The State will not compensate the Contractor for any of the Contractor's time or effort to educate or otherwise make the new subcontractor(s) ready to begin work on the contract.

The bidder's obligation to pay its subcontractors is an independent obligation from the State's obligation to pay or to enforce the payment of any money to any subcontractor. Contractor is solely responsible for any payments to or claims made by subcontractors.

3.4.1. BIDDER DECLARATION FORM (M)

The bidder must complete and submit ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105 , with its Final Proposal. When completing the declaration, the bidder must identify all subcontractors proposed for participation in the Contract. The bidder awarded the Contract is contractually obligated to use the subcontractors for the corresponding work identified, unless the Agency/state entity agrees to a substitution and it is incorporated, in writing. If the bidder is not using subcontractors, the bidder must still complete ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105 answering the applicable questions on the form, and submit it with its Final Proposal. The form is available at:

https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/gspd05-105.pdf

3.5. AMENDMENT

Any Contract executed as a result of this solicitation may be amended consistent with the terms and conditions of the Contract and by mutual consent of both parties, subject to approval by the Statewide Technology Procurement.

3.6. FINANCIAL RESPONSIBILITY INFORMATION

3.6.1. FINANCIAL STABILITY

In order to minimize the potential risk of default due to financial issues, the State reserves the right to request additional documentation throughout the life of the awarded Contract.

The State must be assured that the bidder continues to have the financial resources to sustain its operations during system development and implementation phases including the time required for the State to pay the Contractor after system acceptance.

3.7. INCORPORATION OF EVAQ REQUIREMENTS

Bidders are advised that the Contract awarded as a result of this solicitation shall automatically incorporate by reference all Requirements as well as Terms and Conditions of the eVAQ. The Bidder's eVAQ, in its entirety, shall be incorporated into any Contract awarded as a result of this solicitation, and shall remain in effect after eVAQ expiration, and throughout the life of the Contract awarded as a result of this solicitation, including all optional years.

3.8. GENERAL PROVISIONS

3.8.1. CLOUD COMPUTING - SOFTWARE AS A SERVICE

The Contract awarded as a result of this solicitation shall automatically incorporate by reference the CLOUD COMPUTING – SOFTWARE AS A SERVICE (SaaS) GENERAL PROVISIONS (Revised and Effective (11/19/2021), which can be found at the following URL:

https://www.dgs.ca.gov/-/media/Divisions/PD/PTCS/OPPL/Model-Language/IT/ITGeneralProvisions11192021.docx?la=en&hash=1333CDCE673BA36829779048AF8B233AF70

3.8.2. CLOUD COMPUTING SERVICES SPECIAL PROVISIONS

If the bidder's solution includes commercial Software as a Service (SaaS) as part of the solution, the Contract awarded as a result of this solicitation shall automatically incorporate by reference the "State Model: Cloud Computing Services Special Provisions for Software as a Service (SaaS)," which can be found at the following URL:

https://www.dgs.ca.gov/-/media/Divisions/PD/PTCS/OPPL/CLOUDCOMPUTINGSERVICESSPECIALPROVISIONS_18_0301.docx?la=en&hash=D15B144C

3.9. WORKERS' COMPENSATION/EMPLOYER'S LIABILITY (M)

The Prime Contractor shall maintain statutory workers' compensation and employer's liability coverage for all its employees who will be engaged in the performance of the Contract, including special coverage extensions where applicable. Employer's liability limits of $1,000,000 shall be required. The bidder is required to sign ATTACHMENT 6: WORKERS' COMPENSATION CERTIFICATION and submit it with its Final Proposal.

3.10. ADMINISTRATIVE REQUIREMENTS DOCUMENT (M)

The bidder must indicate its willingness and ability to satisfy these requirements by marking “Yes” on the “Bidder Agrees Yes/No” column on ATTACHMENT 4: RESPONSE TO ADMINISTRATIVE REQUIREMENTS. Answering “No” to any of the mandatory administrative requirements or not submitting the required documents with its Final Proposal may result in the proposal being deemed non-responsive.

3.11. COVER LETTER (M)

The Bidder must submit a cover letter on company letterhead containing the following:

- Legal name of the Bidder’s company
- The address of the Bidder’s company
  The body of the cover letter must include the following:
  - A statement the proposal response is the Bidder’s binding offer, good for 120 calendar days from scheduled Contract award date, as noted in SECTION 2.3. KEY ACTION DATES
  - A statement indicating the Bidder agrees to the terms and conditions of this solicitation and accepts responsibility as the prime Contractor if awarded the Contract resulting from this solicitation
  - A statement indicating the Bidder has available staff with the appropriate skills to complete the Contract for all services and provide all deliverables as described in this solicitation and SOW
  - Be signed by an individual who is authorized to bind the bidding firm contractually. The individual’s name must also be typed, and include the title or position that the individual holds in the firm. An unsigned

cover letter in the Bidder's Final Proposal may deem a Bidder non-responsive and may be the basis for rejection of the Bidder's Final Proposal.
- The email and phone number of the person signing the letter
- The date signed

3.12. CONFIDENTIALITY STATEMENT (M)

The Bidder must agree to the State's confidentiality requirements by submitting a signed ATTACHMENT 3: CONFIDENTIALITY STATEMENT, for the Bidder's company. The completed confidentiality statement must be submitted with ATTACHMENT 2: INTENT TO BID, as indicated in SECTION 2.3. KEY ACTION DATES.[2]

The Bidder engaging in services pertaining to this solicitation, requiring contact with confidential State information or State customer information will be required to exercise security precautions for all such data that is made available and must accept full legal responsibility for the protection of this confidential information. This includes all statistical, personal, technical, and/or other confidential personal data and information relating to the State's operations that are designated confidential by the State.

The Bidder will also be required, upon Contract award, to submit a signed confidentiality statement from all personnel, agents, and subcontractors assigned to the awarded Contract.

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[2] ATTACHMENT 3: CONFIDENTIALITY STATEMENT must be included in the Final proposal and/or prior to Bidder's access to the Bidders' Library.

3.13. SOCIOECONOMIC PROGRAMS

3.13.1. BIDDER'S PREFERENCE AND INCENTIVE DECLARATION

The Bidder must complete and submit ATTACHMENT 8: BIDDING PREFERENCES AND INCENTIVES, with its proposal. The Bidder must indicate on ATTACHMENT 8: BIDDING PREFERENCES AND INCENTIVES whether it is or is not claiming each preference and/or incentive. Refer to SECTION 7. EVALUATION for details on the amount and application of preference and incentive points during proposal evaluation.

3.13.2. DISABLED VETERAN BUSINESS ENTERPRISE (DVBE) PROGRAM

The Disabled Veteran Business Enterprise (DVBE) Participation Goal Program for State contracts are established in Public Contract Code (PCC), §10115 et seq., Military and Veterans Code (MVC), §999 et seq., and California Code of Regulations (CCR), Title 2, §1896.60 et seq.

Information regarding the DVBE Program Requirements may be viewed at:

https://www.dgs.ca.gov/PD/Services/Page-Content/Procurement-Division-Services-List-Folder/Certify-or-Re-apply-as-Small-Business-Disabled-Veteran-Business-Enterprise

The Bidder who has been certified by California as a DVBE (or who has obtained the participation of subcontractors certified by California as a DVBE) must submit a completed form(s) STD.843 Disabled Veteran Business Declarations for each DVBE. All disabled veteran owners and disabled veteran managers of the DVBE(s) must sign a form for each DVBE and submit as ATTACHMENT 7: DVBE DECLARATIONS. The form is available at:

https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/pd_843.pdf

The Office of Small Business and DVBE Services offer program information and may be reached at:

Office of Small Business and DVBE Services
707 Third Street, 1st Floor, Room 400
West Sacramento, CA 95606
Receptionist: (916) 375-4940 Fax (916) 375-4650

PLEASE READ THESE REQUIREMENTS CAREFULLY. FAILURE TO COMPLY WITH THE MINIMUM DVBE PARTICIPATION REQUIREMENT WILL CAUSE YOUR SOLICITATION RESPONSE TO BE DEEMED NONRESPONSIVE AND YOUR FIRM INELIGIBLE FOR AWARD OF THE PROPOSED CONTRACT.

3.13.2.1. DVBE PARTICIPATION REQUIREMENT (M)

The Bidder must fully comply with DVBE Participation Program requirements in the Final Proposal. Failure to submit a complete response with the Bidder's Final Proposal may deem the Bidder non-responsive and may be the basis for rejection of the Bidder's proposal. The Bidder's response must include a minimum DVBE participation goal of three percent (3%) of the Bidder's net proposal price with one (1) or more DVBE.

The Bidder must complete the Bidder Declaration GSPD-05-105 form and submit as BIDDER DECLARATION (GSPD-05-105), with Final Proposal. This form and completion instructions is available at:

https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/gspd05-105.pdf

The Bidder who has been certified by California as a DVBE (or who has obtained the participation of subcontractors certified by California as a DVBE) must submit a completed form(s) STD.843 Disabled Veteran Business Declarations for each DVBE. All disabled veteran owners and disabled veteran managers of the DVBE(s) must sign a form for each DVBE and submit as Exhibit 13: DVBE Declarations. The form is available at:

www.documents.dgs.ca.gov/pd/poliproc/STD-843FillPrintFields.pdf

3.13.2.2. DVBE INCENTIVE (O)

In accordance with Military and Veterans Code §999.5(a), an incentive will be given to all Bidders who exceed the three percent (3%) DVBE mandatory participation. For Contract award evaluation purposes only, the State shall apply the incentive amount based on the amount of DVBE participation obtained above the three percent (3%) requirement. The incentive is only given to those Bidders who are responsive to the DVBE program requirement and propose DVBE participation in the resulting Contract that exceeds the mandatory three percent (3%) requirement. If the Bidder is claiming a DVBE incentive, the Bidder must complete the Bidder Declaration GSPD-05-105 form as ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105 for each DVBE as ATTACHMENT 7: DVBE DECLARATIONS, and ATTACHMENT 8: BIDDING PREFERENCES AND INCENTIVES and submit with its Final Proposal. If the Bidder is not using subcontractors, the Bidder is still required to complete ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105, answering the applicable questions on the form and submit with Final Proposal. See SECTION 7. EVALUATION for details on the amount and application of the incentive during proposal evaluation.

The GSPD-05-105 form and its completion instructions are available at:

https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/gspd05-105.pdf

3.13.3. SMALL BUSINESS PREFERENCE (O)

§14835 et seq. of the California Government Code requires that a five percent (5%) preference be given to Bidders who qualify as a small business The rules and regulations of this law, including the definition of a small business, or qualifying non-small business, are contained in Title 2, California Code of Regulations, §1896 et seq. The definition of nonprofit veteran service agencies qualifying as a small business is contained in §999.50 et seq. of the Military and Veterans Code. The Bidder must complete and submit ATTACHMENT 8: BIDDING PREFERENCES AND INCENTIVES, and the Bidder Declaration GSPD-05-105 form and submit as ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105, with Final Proposal. If the Bidder is not using subcontractors, the Bidder must complete the Bidder Declaration GSPD-05-105 form answering the applicable questions on the form and submit it as ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105, with Final Proposal. More information regarding the Small Business Preference may be found at:

https://www.dgs.ca.gov/PD/Services/Page-Content/Procurement-Division-Services-List-Folder/Certify-or-Re-apply-as-Small-Business-Disabled-Veteran-Business-Enterprise

3.13.4. NON-SMALL BUSINESS SUBCONTRACTOR PREFERENCE (O)

A five percent (5%) proposal preference is available to Bidders who qualify as a non-small business claiming at least 25 percent (25%) California-certified small business subcontractor participation. If claiming the non-small business subcontractor preference, the Bidder's response must include a list of the small businesses with which the firm commits to subcontract in an amount of at least 25 percent (25%) of the net proposal price with one (1) or more California-certified small businesses. Each listed certified small business must perform a "commercially useful function" in the performance of the Contract as defined in Government Code §14838(b)(1)(2).

Bidders claiming the five percent (5%) preference must commit to subcontract at least 25 percent (25%) of the net proposal price with one (1) or more California-certified small businesses. Completed certification applications and required support documents must be submitted to the Office of Small Business and DVBE Services (OSDS) no later than 5 p.m. of the proposal due date, and the OSDS must be able to approve the application as submitted. Questions regarding certification should be directed to the OSDS at (916) 375-4940.

The preference to a non-small business firm that commits to small business or microbusiness subcontractor participation of 25 percent (25%) of its net proposal price shall be given five percent (5%) of the highest responsive, responsible firm's total score. A non-small business that qualifies for this preference, may not take an award away from a certified small business.

If claiming a small business preference or using small business subcontractors, the Bidder must complete the Bidder Declaration GSPD-05-105 form and submit as ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105, and ATTACHMENT 8: BIDDING PREFERENCES AND INCENTIVES and submit with Final Proposal. If the Bidder is not using subcontractors, the Bidder must complete the Bidder Declaration GSPD-05-105 answering the applicable questions on the form and submit as ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105 with Final Proposal.

3.13.5. COMMERCIALLY USEFUL FUNCTION (M)

All certified small business, micro business, and/or DVBE Contractors, subcontractors or suppliers must meet the commercially useful function requirements under Government Code Section 14837 (for SB), Military and Veterans Code Section 999 (for DVBE), and Title II California Code of Regulations, Section 1896.4 and 1896.62.

A Contractor, subcontractor, or supplier will not be considered to perform a commercially useful function if the Contractor's, subcontractor(s), or supplier's role is limited to that of an extra participant in the transaction, the awarded Contract, or project through which funds are passed to obtain the appearance of small business or micro business participation.

The Bidder must complete ATTACHMENT 9: COMMERCIALLY USEFUL FUNCTION (CUF) CERTIFICATION for each Small Business and/or DVBE (prime and/or subcontractor(s)). All Bidders and subcontractors identified in the proposal response to fulfill the requirements for one (1) or more of the socio-economic programs (DVBE and small business) must perform a commercially useful function (CUF) in the resulting Contract. CUF is defined pursuant to Military and Veterans Code §999(b)(5)(B) and Government Code §14837(d)(4)(A) for the DVBE and small business programs, respectively.

Bidders claiming one (1) or more of the socio-economic programs must complete the Bidder Declaration GSPD-05-105 form and submit as ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105, with its Final Proposal. If the Bidder is not using subcontractors, the Bidder must complete the Bidder Declaration GSPD-05-105 form answering the applicable questions on the form, and submit it as ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105 and submit with Final Proposal. The Bidder Declaration GSPD-05-105 is available at:

https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/gspd05-105.pdf

Bidder(s) may be required to submit additional written clarifying information regarding CUF on ATTACHMENT 9: COMMERCIALLY USEFUL FUNCTION (CUF) CERTIFICATION. Failure to submit the requested written information as specified may be the basis for rejection of the bidder's Final Proposal.

3.14. PRODUCTIVE USE REQUIREMENTS

The productive use requirements protect the State from being an experimentalist for new equipment and software having no record of proven consistent performance. The State will only accept proven technology products.

The proposed solution must include only equipment and off-the-shelf software that is currently supported by its manufacturer for at least the time specified in Table 3-1, Productive Use Timeframes. No equipment and/or software may be proposed, specified, or employed if the manufacturer has announced an end to support. The productive use requirements defined in this section do not apply to any portion of the custom software developed for the State or to modifications to custom software that was developed for the State under this Contract prior to proposed submittal and throughout Contract duration.

3.14.1. CUSTOMER IN-USE

The State requires each equipment and software component proposed as part of an automated system adhere to the following:

1. Must have been installed and in productive use, in substantially the conformation bid;
2. For a paying customer external to the Bidder's organization; and
3. For at least the number of months shown in Table 3-1 below and prior to the last day to submit Final Proposal as defined in SECTION 2.3. KEY ACTION DATES.

Table 3-1: Productive Use Timeframes

Product	Project Cost	Final Proposal Submission
Category 1 - Critical Software Software that is required to control the overall operation of a computer system or peripheral equipment. Included in this category are operating systems, data base management systems, language interpreters, assemblers and compilers, communications software, and other essential system software.	Less than $10,000	1 month
	$10,000 up to $100,000	3 months
	More than $100,000	6 months
Category 2 - All Information Technology Equipment and Non-critical Software. Information technology equipment is defined in SAM §4819.2.	Less than $10,000	1 month
	$10,000 up to $100,000	3 months
	More than $100,000	4 months

Design changes in required system control modules or in components critical to the processing requirements of the State's workload are also subject to the In-Use Requirement. Increases or decreases in numbers of components or minor alteration in equipment or minor modifications or updates to software to provide improvements or features, to correct errors, or to accommodate hardware changes may be exempt from the In-use requirement by CDT STP, if no changes in logic, architecture or design are involved.

3.14.2. HARDWARE/EQUIPMENT

All equipment offered must be new and the latest model in current production. Used, shopworn, refurbished, demonstrator, prototype, or discontinued models are not acceptable.

3.14.3. RUSSIA-UKRAINE CONFLICT ECONOMIC SANCTIONS

Contractor(s) shall ensure compliance with economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any sanctions imposed under state law (collectively, economic sanctions) including by refraining from new investments in, and financial transactions with, Russian institutions or companies that are headquartered or have their principal place of business in Russia (Russian entities), and not transferring technology to Russia or Russian entities. Contractor(s) are further notified that they will be subject to additional reporting requirements pursuant to Executive Order (N-6-22) issued by Governor Gavin Newsom on March 4, 2022.

4. PROPOSAL REQUIREMENTS

This section contains the mandatory qualifications, functional and non-functional requirements pertaining to the required services that must be met in order to be considered responsive and responsible to this solicitation. In addition to meeting these requirements, the Bidder must adhere to the SOW as described in ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK of the solicitation.

Unless designated otherwise, all of the requirements in this section are mandatory. The documents that must be submitted with the bidder's Final Proposal are noted as Mandatory "(M)" or Mandatory Scored "(MS)."

Additionally, SECTION 4.1.3. STAFF QUALIFICATIONS (M or DS) contains optional requirements noted as Desirable Scored (DS) that may require documents to be submitted with Bidder's proposal.

The State has determined that it is best to define its own needs, desired operating objectives, and desired operating environment. The State will not tailor these needs to fit some solution a Bidder may have available; rather, the Bidder shall propose to meet the State's needs as defined in this solicitation.

The Bidder qualifications and solution requirements listed in this section are denoted as follows:

1. (M) Sections labeled as "Mandatory", or "M" are not negotiable. To be considered responsive and responsible to these requirements, all requirements identified as (M) must be responded to. A "fail" will result in a proposal being deemed non-responsive and, therefore, will be disqualified. Failure to respond to any (M) requirements where indicated shall result in a "fail" and disqualification of the proposal.
2. (MS) Sections labeled as "Mandatory Scored" or "MS" are not negotiable. To be considered responsive and responsible to these requirements, all requirements identified as (MS) must be responded to. A "fail" will result in a proposal being deemed non-responsive and, therefore, will be disqualified. Failure to respond to any (MS) requirements where indicated shall result in a "fail" and disqualification of the proposal. The State's evaluation team will review responses to (MS) requirements and apply points, if applicable, per criteria stated in SECTION 7. EVALUATION.
3. (MO) Sections labeled as "Mandatory Optional" or "MO" are not negotiable. To be considered responsive and responsible to these requirements, all requirements identified as (MO) must be responded to. A "fail" will result in a proposal being deemed non-responsive and, therefore, will be disqualified. Failure to respond to any (MO) requirements where indicated shall result in a "fail" and disqualification of the proposal. It is at the State's option/discretion on whether to utilize the option in the Contract.
4. (DS) Sections labeled as "Desirable Scored" are not required to be offered by the Bidder in order to be compliant with the solicitation requirements. The Bidder may choose whether to meet requirements labeled as (DS). However, if a Bidder offers any of these (DS) requirements, the Bidder must meet the minimum requirements as stated in the section. The State will review responses to (DS) requirements and apply points, if applicable, per criteria stated in SECTION 7. EVALUATION.

4.1. QUALIFICATION REQUIREMENTS

The Bidder is expected to have a proven record of success and be responsible for all aspects of the service, including any subcontractors and the project team/staff proposed.

The Bidder must meet the minimum Bidder Qualification and Staff Qualification Requirements. Failure to meet any of the minimum requirements shall result in a proposal being deemed non-responsive and therefore disqualified.

4.1.1. BIDDER QUALIFICATIONS (M)

The Bidder must complete and submit as a part of the proposal response, ATTACHMENT 12: BIDDER QUALIFICATIONS FORM, to confirm that the Bidder's experience meets all the minimum requirements.

These are also included on ATTACHMENT 12: BIDDER QUALIFICATIONS FORM. It is incumbent upon the Bidder to provide enough detail in the Final Proposal for the State to evaluate the Bidder's ability to meet the requirements and perform the services as described in this solicitation.

The Bidder must provide information for a minimum of three (3) projects of equivalent or greater scope and size as the RPSD Project. A separate ATTACHMENT 12: BIDDER QUALIFICATIONS FORM must be submitted for every project used to meet the minimum required experience. Any given project may meet multiple requirements, but at least three (3) projects and not more than five (5) projects must be provided to meet the minimum Bidder requirements. If more than five (5) Bidder Qualification Forms are submitted, only the first five (5) in the order presented in the proposal will be evaluated.

Project experience must have occurred within ten (10) years prior to the solicitation release date for all projects and must have been completed in the United States of America. Evaluation will be completed in accordance with SECTION 7. EVALUATION.

The minimum Bidder requirements are:

1. Five (5) years of experience performing System architecture and design on equivalent project(s) to the RPSD Project or on bigger projects than the RPSD Project
2. Five (5) years of Project Management experience managing Software development or implementation projects of medium to large size using Software Development Life Cycle (SDLC) methodologies, and source code version control and build platforms.
3. Three (3) years of experience with data migration activities (data analysis, data profiling, data cleanup, extract, convert/transform, migrate, and verify)
4. Five (5) years of experience performing System design and development activities (Setting up development and test environments, conducting requirements and design workshops, requirements analysis, data modeling, PostgreSQL and Python/Django based web application design and development, back-end programming, configuration, API development, System interfaces development, and integration)
5. Three (3) years of experience performing testing activities (creating test plans, test scripts, test data, unit testing, system testing, interface/ integration testing, providing UAT support, security testing, System recovery testing, defect analysis, and impact analysis for change requests)
6. Three (3) years of experience planning and developing training material (including case studies, labs/exercises, user guides, and technical reference manuals), and conducting training classes or workshops
7. Three (3) years of experience performing System deployment activities (transition planning, release planning, System deployment, post-implementation verification, and technical knowledge transfer)
8. Three (3) years of experience in AWS Cloud/GovCloud platform performing resource provisioning, configuration, system environments [development, testing, training, pre-production, and production] setup, security architecture design and implementation, System deployment, System monitoring and control, and disaster recovery activities
9. Two (2) years of experience providing System Maintenance & Operations (M&O) including implementing enhancements (change requests)

4.1.2. BIDDER REFERENCES (M, MS)

The Bidder must complete and submit as part of Final Proposal, ATTACHMENT 13: BIDDER REFERENCE FORM for each of the projects cited on the corresponding ATTACHMENT 12: BIDDER QUALIFICATIONS FORM.

The purpose of the Bidder reference requirement is to provide the State the ability to assess the Bidder's experience in providing similar or relevant services to other organizations through a satisfaction rating provided by the Bidder's previous project clients. The description of their projects must be detailed and comprehensive enough to permit the State to assess the similarity of those projects to the work anticipated for the Contract resulting from this solicitation.

ATTACHMENT 12: BIDDER QUALIFICATIONS FORM must be completed in its entirety, signed, and dated by a reference that performed a management or supervisory role on the reference project to be considered responsive. The ATTACHMENT 12: BIDDER QUALIFICATIONS FORM must be returned to the Bidder for submission with Final Proposal. Photocopies may be accepted as long as the form, response, and signature are legible. No information corrections or changes may be made on the reference form by the Bidder. Forms with alterations or changes to the entered information may deem the Bidder non-responsive and may be the basis for rejecting the Bidder's proposal.

References may be contacted to validate submitted responses based on customer satisfaction in accordance with SECTION 7. EVALUATION. References must be external to a Bidder's organization and corporate structure. Failure to provide verifiable references may cause the proposal to be rejected.

If the reference is not allowed either legally or by company/organization policy to sign the reference form, the reference must type in its full name with a brief statement on the form outlining the reason they are not permitted to sign the States reference form. If needed, the State may contact either the Bidder and/or staff references to validate the reference submitted. The evaluation team will make two (2) attempts via phone and/or email to validate Bidder and/or staff experience using the information provided in the Bidder and/or staff reference forms, as applicable.

4.1.3. STAFF QUALIFICATIONS (M or DS)

The Bidder is fully responsible for all necessary staffing resources to successfully implement RPSD Project within the agreed upon schedule and to perform to the standards set forth in the SECTION 35. Service Level Agreements (SLAs).

The Bidder must complete and submit as part of Final Proposal all required ATTACHMENTS 17.1, 17.3, 17.5, 17.7 KEY STAFF QUALIFICATION FORMS. The Bidder must provide complete information to confirm that each of the four (4) proposed Key Staff possess the experience and qualifications as specified for their project role described in all required SECTION 11. Key Staff Qualifications and Skills. The Bidder may cite as many projects per proposed staff to meet the requirements. Each cited project for each staff must be submitted separately on all required ATTACHMENTS 17.1, 17.3, 17.5, 17.7 KEY STAFF QUALIFICATION FORMS. It is incumbent upon the Bidder to provide enough detail in the response for the State to evaluate the Bidder's proposed staff's ability to meet the requirements and perform the services as described in this solicitation.

The Bidder's proposed staff must meet all of the mandatory minimum qualification requirements. All experience used to meet the minimum requirements must have occurred within the last ten (10) years prior to the solicitation release date, unless stated otherwise. Points will be awarded to Bidders that meet the criteria set forth in the desirable experience qualifications as specified in SECTION 7. EVALUATION.

The following Key Staff are required to perform the services as described in ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK.

- One (1) Project Manager role
- Three (3) Technical Lead roles:
    - Web Application Development Lead
    - Back-End Lead
    - Testing/QA Lead

Additional Contractor staff may also be necessary.

4.1.4. STAFF REFERENCES (M)

The Bidder must complete and submit as part Final Proposal, all required Key Staff Reference Form. The Bidder must submit a completed staff reference form for each project cited in all Key Staff Qualification Forms.

The purpose of the staff reference requirement is to provide the State the ability to assess the staff's experience in providing similar or relevant services to other organizations through a satisfaction rating provided by the staff's previous clients. The description of their projects must be detailed and comprehensive enough to permit the State to assess the similarity of those projects to the work anticipated for the Contract resulting from this solicitation.

References must complete all required information on the staff reference forms. Each exhibit must be completed in its entirety, signed, and dated by the staff's reference contact who performed a Key Staff role on the referenced project to be considered responsive. Photocopies may be accepted as long as the form, response, and signature are legible. No information corrections or changes may be made on the staff reference forms. Forms with alterations or changes to the entered information may be rejected.

References may be contacted to verify staff's experience qualification information submitted. References must be external to a Bidder's organization and corporate structure. CPUC Energy Division staff may not be used as a reference to satisfy this requirement. Failure to provide verifiable references may deem the Bidder non-responsive and may be the basis for rejection of the Bidder's proposal.

4.1.4.1. FULL-TIME/PART-TIME MONTH EQUIVALENTS DEFINITION

For each experience requirement (marked by “x”) that is met or partially met on the referenced project, specify the number of full-time month equivalents experience that the Staff person accrued on the referenced project. For each period in which the Staff person performed work applicable to the claimed experience for a minimum of twenty (20) work days of a minimum total of 140 hours (the minimum required to represent working full-time), the Staff accrues one (1) full-time month equivalent experience. To calculate and report the full-time month equivalents experience for Staff who worked part-time (partial) on a referenced project, use the following calculation:

If the Staff worked half (½) time on a referenced project, experience should be pro-rated to one-half (½) or 0.5 month full-time month equivalent experience for each period in which the staff person worked a minimum of seventy (70) hours over twenty (20) State Business Days in a month.

For each experience requirement that the Staff’s work on a referenced project addresses, report the total number of full-time month equivalents’ experience the Staff’s work represents using the calculations as previously described in this section, which depend upon the time period (calendar period) during which the Staff worked on the referenced project and whether he/she worked on a full-time or some other basis.

4.1.5. STATEMENT OF WORK (M)

ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK identifies and describes the tasks and responsibilities of the Contractor and the responsibilities of the State during the term of the Contract. The bidder must submit ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK with its Final Proposal.

The bidder is advised that deviations to the SOW may be the basis for rejection of the bidder’s Final Proposal. Refer to Part 2, Bidder Response ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK.

4.2. SOLUTION REQUIREMENTS

This section contains the detailed functional and non-functional requirements pertaining to the proposed system that must be met in order to be considered responsive to this solicitation. In addition to meeting these requirements, the Bidder must adhere to the SOW as described in ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK.

4.2.1. FUNCTIONAL AND NON FUNCTIONAL REQUIREMENTS (M)

The Bidder must complete the following exhibits and include each exhibit in its Final Proposal in accordance with SECTION 4. PROPOSAL REQUIREMENTS and SECTION 6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS.

1. EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS

The purpose of the functional, non-functional and transition requirements is to confirm that the Bidder agrees to provide the minimum requirements that the State has determined to be necessary for the new RPSD System. Each Bidder must complete and submit as part of its Final Proposal, EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS. The Bidder must indicate compliance and confirmation to each of the requirements by marking “Yes” or “No” in the column labeled “Contractor Agrees to provide the Requirement Yes/ No”. A blank or “NO” answer in either of these two (2) columns will be deemed non-responsive and will be the basis for rejection of the Bidder’s proposal.

2. EXHIBIT B: DELIVERABLES TABLE

The purpose of the deliverables table is to confirm that the Bidder agrees to provide each deliverable as provided in EXHIBIT B: DELIVERABLES TABLE. The Bidder must complete and submit as part of the Final Proposal, EXHIBIT B: DELIVERABLES TABLE. Each Bidder must indicate compliance and confirmation with each of the deliverables by marking "Yes" or "No" in the column labeled "Contractor Agrees to provide the Deliverable." A blank or "No" answer in this column will be deemed non-responsive and may be the basis for rejection of the Bidder's proposal.

The Bidder is reminded that in order to be considered responsive and responsible to the requirements, the Bidder must provide enough detail in Final Proposal in order for the State to evaluate the Bidder's ability to meet the requirements. Refer to SECTION 7. EVALUATION for details on how the requirements will be scored as part of the overall evaluation.

5. COST

Cost is a primary evaluation criterion weighted at 50% of the total score of 2000 points. The maximum total points available for cost is 1000 points. Evaluation in this category will be based on the lowest total estimated net cost as calculated according to the methodology in this section and SECTION 7. EVALUATION.

All proposed costs for all line items must be all inclusive, thereby including the cost of any and all services required in this solicitation.

The intent is to structure the pricing format in order to facilitate a straightforward comparison among all Bidders and foster competition to obtain the best market pricing. Consequently, the California Public Utilities Commission requires that each Bidder's cost be in the format outlined in this section. Therefore, the Bidder is advised that failure to comply with the instructions listed in this section, such as submission of an incomplete proposal, use of alternative pricing structures or different formats than the one requested, may be the basis for rejection of the Bidder's proposal.

Important Note: It is imperative that no cost information is included in the body of the proposal. Cost information must only be submitted in the Bidder's Response, Volume 2, Cost in accordance with SECTION 6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS.

5.1. COST WORKBOOK (M)

Services, features, and costs included in the EXHIBIT C: COST WORKSHEETS are those that the Bidder must provide for the term of the Contract as identified in the ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK, which includes all optional years. All Bidders must provide individual costs as indicated in the cost worksheets and submit with the bidder's Final Proposal. Items submitted with no price will be considered as offered at no cost.

5.2. COST WORKBOOK INSTRUCTIONS

The cost workbook includes multiple cost worksheets that must be completed by the Bidder and submitted with its Final Cost Proposal to be considered responsive. The cost worksheets lists all cost elements required to implement, maintain, and operate the proposed services. The Bidder must include the completed cost worksheets sealed in Volume two (2), Cost.

The Bidder is required to enter all cost data in the format prescribed by the cost workbook, even if there are no costs for the item indicated on the worksheet(s). In these instances, the Bidder must indicate the cost as a zero ($0). In addition, if any character other than a numeral is used (e.g., a dash), the State will assume the cost of the item to be zero ($0). All other fields must not be modified. If the cost worksheet is modified or cells are left blank, the State may reject the Bidder's proposal. The cost worksheets must be filled out completely or the State may reject the Bidder's proposal.

The "Percent of Total Cost" column in the worksheet identifies the percent of the Bidder's total cost that will be paid for that deliverable.

> Example: If the Percent of Total Cost for Deliverable 1 is listed as 10% and the Bidder's total cost is $10,000.00, then the amount that will populate for Deliverable 1 will be $1,000.00

The State has populated some of the cells with formulas, however it is the responsibility of the Bidder to ensure worksheets and calculations are correct and accurate. The State will not assume responsibility for any cost figures that do not calculate properly. Cells highlighted in yellow, indicate the cells in which the Bidders must enter its cost.

5.2.1 Cost Workbook

The Cost Workbook consists of three (3) worksheets, Instructions, #1 - Payment Milestones, and #2 - UT Hourly Rates.

5.2.1.1 Instructions Worksheet

The instructions worksheet provides instructions for completing #1 - Payment Milestones and #2 - UT Hourly Rates.

5.2.1.2 Worksheet#1 - Payment Milestones

Rows 1-2 contains the header for the worksheet where the Bidder will enter the Bidder name in Box B2.

Column A, Payment Milestone: For reference only. This column lists a payment milestone number.

Column B, Scope of Work: For reference only. This column lists a brief name for the scope of work associated with each payment milestone.

Column C, % of Total Cost: For reference only. This column identifies the percent of the Bidder's total cost that will be paid for that deliverable.

Column D, Payment Milestone Cost: This column will populate amounts for cells, D8, D10, D12, D14, D16, D18, D20, D22, D24, D26, D28, D30 and D32 based on the dollar amount the Bidder placed in cell D38. The Bidder shall complete this column for any cell that is highlighted in yellow, which are D36, D38, D45 and D47.

5.2.1.3 Worksheet #2 - UT Hourly Rates

Rows 1-2 contain the header for the worksheet where the Bidder will enter the Bidder name in Box B2.

Column A-B, Job Classification: Bidder shall update this column as needed. This column lists the job classifications. The first four (4) classifications listed are the Key Staff which are required. Additional common job classifications can be added. Bidder shall list all job classifications for their project staff and may add or delete rows as needed.

Column C, Hourly Rate*: Bidder shall complete this column. This column lists the hourly rate for the corresponding job classification.

5.3. PROJECT PAYMENT TERMS

In accordance with Public Contract Code, §12112, the State will withhold, from each invoiced payment amount to the Contractor, an amount equal to ten percent (10%) of the payment per the SOW.

The payment schedule for RPSD implementation is deliverables-based except for maintenance and operations services.

5.4. SALES TAX

Sales tax is not to be included in the cost worksheets. If awarded the Contract, sales tax, if applicable, should be added at time of invoicing. The sales tax rate applied should be based on the rate of the area where the service is to be provided. See Board of Equalization Regulation 1502 (f) (1) (D).

6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS

These instructions identify the mandatory proposal format and the approach for the development and presentation of proposals. The format instructions must be followed, all requirements and questions in the solicitation must be completed and all requested data must be supplied. The Bidder shall carefully examine the solicitation and be satisfied with the compliance conditions prior to submitting a proposal.

Bidder shall upload a soft copy of its entire proposal, including the Cost Workbook, as specified in SECTION 6.3. DELIVERY OF SUBMITTALS.

It is important that Bidder's soft copy proposals are submitted in their entirety. Proposals not submitted in the manner specified may be rejected.

The State will not be liable for any costs incurred by any Bidder in responding to this solicitation, regardless of whether the State awards the Contract through this process, decides not to move forward with the project, cancels this solicitation for any reason, or Contracts for the project through other processes or by issuing another solicitation.

6.1. PREPARATION

Proposals are to be prepared in such a way as to provide a straightforward, concise delineation of capabilities to satisfy the requirements of this solicitation document. Expensive bindings, colored displays, promotional materials, etc., are not necessary or desired. Emphasis should be concentrated on conformance to the solicitation document instructions, responsiveness to the solicitation document requirements, and completeness and clarity of content.

6.2. COMPLETION OF PROPOSALS

Proposals must be complete in all respects as required by this section. A Final Proposal may be rejected if it is conditional or incomplete, or if it contains any alterations of form or other irregularities of any kind. A Final Proposal will be rejected if any such defect or irregularity constitutes a material deviation from the solicitation document requirements. The Final Proposal must contain all costs as required in SECTION 5. COST and SECTION 6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS.

6.3. DELIVERY OF SUBMITTALS

6.3.1. FORMATTING

It is Bidder's responsibility to ensure its proposal is submitted in a manner that enables the State to easily locate all response descriptions and exhibits for each requirement of this solicitation.

6.3.2. SOFT COPY

Fourteen (14) days prior to the Last Day to Submit Final Proposals as specified in SECTION 2.3. KEY ACTION DATES, the Bidder must, via email, provide the Procurement Official specified in SECTION 2.2.1. PROCUREMENT OFFICER no more than two (2) Bidder Contacts and corresponding email addresses for the Bidder's Final Proposal upload. After receipt of the Bidder Contacts' information, an invitation to a filesharing site will be sent to the specified individual(s). A separate site will be created for each Bidder only accessible by the Bidder Contact(s) and the Evaluation Team. It is the Bidder's responsibility to confirm receipt of the invitations with the Procurement Official.

The file-sharing site will provide two folders titled "VOLUME 1 - Administrative, Technical and Literature" and "VOLUME 2 - Cost" within which to submit the Bidder’s Final Proposal. Bidder Contacts will be required to upload the soft copy of the Bidder’s Final Proposal to the appropriate folders as specified in SECTION 6.5. FINAL PROPOSAL FORMAT AND CONTENT.

The soft copy Cost information shall be in MS Excel format (version 2013 or higher) in a file titled "EXHIBIT C COST WS - ABC Corp." within the folder titled Volume 2: Cost.

If a file is uploaded in error to the file-sharing site folders, Bidder may submit a request by email, to the Procurement Officer prior to the last Day to Submit Final Proposals. Bidders must not upload .zip files into the file-sharing site.

6.4. FINAL PROPOSAL FORMAT AND CONTENT

Proposals must contain all the material specified in this section for Volumes 1 and 2. It is important that all sections and exhibits are complete and included with the Proposal submissions in order for the State to identify completeness and responsiveness to the requirements of this solicitation. Each volume of the proposal must be structured as indicated in SECTION 6.4.1. VOLUME 1: RESPONSE TO ADMINISTRATIVE REQUIREMENTS, TECHNICAL REQUIREMENTS AND LITERATURE and SECTION 6.5.2. VOLUME 2: COST.

Each volume of the proposal must be provided separately, submitted, and must be structured in the following manner:

6.4.1. VOLUME 1: RESPONSE TO ADMINISTRATIVE REQUIREMENTS, TECHNICAL REQUIREMENTS AND LITERATURE

ADMINISTRATIVE:

1. Table of Contents. This section must contain a Table of Contents. All parts of the proposal, including forms, must be identified by volume and page number. The Table of Contents must identify all figures, charts, graphs, etc.
2. Cover Letter (Refer to SECTION 3.11. COVER LETTER (M)
3. Required solicitation exhibits, in the following order:
    1. ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK
    2. ATTACHMENT 2: INTENT TO BID
    3. ATTACHMENT 3: CONFIDENTIALITY STATEMENT
    4. ATTACHMENT 4: RESPONSE TO ADMINISTRATIVE REQUIREMENTS
    5. ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105
    6. ATTACHMENT 6: WORKERS' COMPENSATION CERTIFICATION
    7. ATTACHMENT 7: DVBE DECLARATIONS
    8. ATTACHMENT 8: BIDDING PREFERENCES AND INCENTIVES
    9. ATTACHMENT 9: COMMERCIALLY USEFUL FUNCTION (CUF) CERTIFICATION
    10. ATTACHMENT 10: TACPA PREFERENCE REQUEST FORMS

TECHNICAL:

RESPONSE TO QUALIFICATION REQUIREMENTS, SOLUTION REQUIREMENTS, AND THE REQUIRED EXHIBITS, IN THE FOLLOWING ORDER:

1. ATTACHMENT 12: BIDDER QUALIFICATIONS FORM
2. ATTACHMENT 13: BIDDER REFERENCE FORM
3. ATTACHMENT 14.1: Project Manager - QUALIFICATIONS FORM

4. ATTACHMENT 14.2: Project Manager - REFERENCE FORM
5. ATTACHMENT 14.3: Web Application Development Lead - QUALIFICATIONS FORM
6. ATTACHMENT 14.4: Web Application Development Lead - REFERENCE FORM
7. ATTACHMENT 14.5: Back-End Lead - QUALIFICATIONS FORM
8. ATTACHMENT 14.6: Back-End Lead - REFERENCE FORM
9. ATTACHMENT 14.7: Testing/QA Lead - QUALIFICATIONS FORM
10. ATTACHMENT 14.8: Testing/QA Lead - REFERENCE FORM
11. EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS
12. EXHIBIT B: DELIVERABLES TABLE
13. ATTACHMENT 17: NARRATIVE RESPONSE

LITERATURE:

Additional reference documents specific and applicable to this procurement should be uploaded into Volume 1, subfolder titled as "Literature." Documents not related to this RFP, such as marketing material, shall not be included in the bid package.

6.4.2. VOLUME 2: COST

EXHIBIT C: COST WORKSHEETS is a separate Excel worksheet that must be completed as set forth in SECTION 5.2. COST WORKBOOK INSTRUCTIONS and uploaded into Volume 2: Cost folder.

7. EVALUATION

This section presents the evaluation process and scoring procedures the State will follow to evaluate Proposals submitted in response to this solicitation. The evaluation process is a multi-step review of each Bidder's Proposal to determine if the Bidder is responsive and responsible, and whether its Proposal provides a "value effective" solution to the State. The value effective Proposal is the Proposal that best meets all requirements set forth in this solicitation and any State negotiated items.

Responsiveness is indicated by meeting all Administrative, Qualification, Solution, and Cost Requirements, and complying with the SECTION 2.4. RULES GOVERNING COMPETITION. If a Bidder's Final Proposal fails to meet a mandatory requirement, it will be considered a deviation in accordance with SECTION 2.4.1. IDENTIFICATION AND CLASSIFICATION OF SOLICITATION REQUIREMENTS. Proposals that do not comply with the mandatory non-negotiated requirements identified in SECTION 2.8. NEGOTIATIONS, must be resolved to the State's satisfaction during negotiations and corrected in the Bidder's BAFO.

The State reserves the right to modify or cancel this procurement in its entirety or in part at any time.

7.1. EVALUATION TEAM

This procurement is being conducted under the guidance of a Procurement Officer from CDT STP (refer to SECTION 2.2.1. PROCUREMENT OFFICER). The Procurement Officer will serve as the Bidder's point of contact for questions and clarification, and will identify the rules governing this procurement.

The State will establish an evaluation team consisting of CPUC management and staff to review and evaluate proposals. The State Procurement Officer will provide guidance to the evaluation team and provide oversight of the evaluation process. The State may engage additional qualified individuals or subject matter experts (SME) during the evaluation process to assist the State in gaining a better understanding of technical, financial, legal, contractual, or program issues. These other individuals do not have voting privileges or responsibility for the evaluation process and will serve solely in an advisory capacity.

7.2. EVALUATION STEPS

7.2.1. EVALUATION OF REQUIRED INFORMATION AND REQUIREMENTS

Proposals must be complete and meet all format and submission requirements as identified in SECTION 6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS. A Final Proposal may be rejected if it is conditional or incomplete, contradicts the requirements, contains any alterations of form, or contains other irregularities of any kind, including alterations to any terms and conditions.

A Final Proposal will be rejected if any such defect or irregularity constitutes a material deviation from the solicitation requirements.

7.2.2. RECEIPT AND PRELIMINARY REVIEW

All proposals received by the time and date specified in SECTION 2.3. KEY ACTION DATES will be acknowledged as having been received on time. Each proposal will be date-and time-marked as it is received, and verified that all it was submitted under an appropriate cover, sealed, and properly identified.

Proposals will remain sealed until the designated time for opening. Bidder's Response, Volume 3 Cost, shall remain sealed and in the possession of the Procurement Official listed in SECTION 2.2.1. PROCUREMENT OFFICER until the evaluations of all Bidder response volumes 1 and 2 have been completed for all Bidders that submitted a proposal.

The Procurement Official will check all proposals for the proper identification and to ensure that required information conforms to the proposal format and submission requirements of SECTION 6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS. Absence of required information may make the proposal non-responsive and may result in Bidder disqualification.

7.2.3. MANDATORY REQUIREMENTS EVALUATION

The State will review each proposal to determine its compliance with all of the requirements set forth in SECTION 3. ADMINISTRATIVE REQUIREMENTS and SECTION 4. PROPOSAL REQUIREMENTS.

The evaluation team will evaluate and score each submitted proposal by consensus for compliance with the requirements designated in SECTION 3. ADMINISTRATIVE REQUIREMENTS and SECTION 4. PROPOSAL REQUIREMENTS. If a Proposal fails to meet any requirement specified in SECTION 3. ADMINISTRATIVE REQUIREMENTS, and SECTION 4. PROPOSAL REQUIREMENTS, the State will determine if the deviation is material.

7.2.4. VALIDATION AGAINST REQUIREMENTS

The State will check each Proposal in detail to determine its compliance with the solicitation requirements. The State reserves the right to use multiple means to validate and determine the Bidder's response to a requirement. This may be through details in its description and/or supporting documentation provided or material that is publicly available, that may either support or contradict the Bidder's claim of intended compliance. If a Bidder's Proposal fails to meet a mandatory requirement, it will be considered a deviation in accordance with SECTION 2.4.1. IDENTIFICATION AND CLASSIFICATION OF SOLICITATION REQUIREMENTS. If a bidder's proposal deviates from any of the non-negotiable items identified in +SECTION 2.9. NEGOTIATIONS, the proposal will be rejected and not considered for negotiation or Contract Award. Any deviation of any requirement other than the mandatory non-negotiable items above, must be resolved to the State's satisfaction during negotiations and corrected in the bidder's BAFO.

During the proposal evaluation, the State may request that the Bidder clarify any area of the proposal that the State determines to be unclear in accordance with SECTION 7. EVALUATION.

7.3. FINAL PROPOSAL EVALUATION

This section outlines how the State will evaluate a Final Proposal and award points in a manner that preserves the integrity of the competitive procurement process.

Proposals will be evaluated according to the procedures contained in this solicitation section.

The maximum points available for this solicitation are 2000 points. All point calculations will be rounded to two (2) decimal places (the nearest hundredth). The Bidder's cost will only be opened if it complies with SECTION 3. ADMINISTRATIVE REQUIREMENTS and SECTION 4. PROPOSAL REQUIREMENTS. Bidders that have a material deviation will be disqualified and their cost will not be opened. The distribution and allocation of maximum points possible for each proposal element is provided in Table 7-1: Scoring and Point Distribution, which identifies each evaluation component, the scoring methodology, and the maximum points available for scored components.

PROPOSAL REQUIREMENTS

Bidders that have a material deviation will be disqualified and their cost will not be opened. The distribution and allocation of maximum points possible for each proposal element is provided in Table 7-1: Scoring and Point Distribution, which identifies each evaluation component, the scoring methodology, and the maximum points available for scored components.

Table 7-1: Scoring and Point Distribution

Maximum possible Scores for each Evaluation Area	
SECTION 3. ADMINISTRATIVE REQUIREMENTS	**Pass/Fail**

Maximum possible Scores for each Evaluation Area	
SECTION 4. PROPOSAL REQUIREMENTS **BID REQUIREMENTS** **(Qualification and Solution Requirements)**	**Maximum Points**
Bidder Qualification Forms (M)	Pass/Fail
Bidder Reference Forms (MS)	100
Staff Qualification Forms (M)	Pass/Fail
Staff Qualification Forms (DS)	200
Staff Reference Forms (M)	Pass/Fail
EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS (M/MO)	Pass/Fail
EXHIBIT B: DELIVERABLES TABLE (M)	Pass/Fail
ATTACHMENT 21: NARRATIVE RESPONSE (MS)	700

Maximum possible Scores for each Evaluation Area	
Preference/Incentive Points	**Maximum Points**
Small Business Preference Points (O)	TBD
DVBE Incentive (O)	TBD
SECTION 5. COST	**Maximum Points**
Cost Worksheets (MS)	1000
Maximum Total Score (Points)	2000
Maximum Total Score with preference/incentive points applied	TBD

7.3.1. ERRORS IN THE FINAL PROPOSAL

An error in the Final Proposal may cause the rejection of that proposal; however, the State may at its sole option retain the proposal and make certain corrections. In determining if a correction will be made, the State will consider the conformance of the proposal to the format and content required by the solicitation, and any unusual complexity of the format and content required by the solicitation.

1. If the Bidder's intent is clearly established based on review of the complete Final Proposal submittal, the State may at its sole option correct an error based on that established intent.
2. If the State discovers obvious clerical or arithmetic errors, the State may, at its sole option, correct such errors. If the mathematical correction results in significant changes to the Bidder's response, the State will provide the Bidder the opportunity through the process identified in SECTION 7.2.4. VALIDATION AGAINST REQUIREMENTS to validate the resulting correction.
3. It is absolutely essential that Bidders carefully review the cost elements in their Final Proposals and BAFOs, since they will not have the option to correct errors after the time for submission.
4. The State may request clarification of items in the Bidder's response if the meaning is not clear to the State, utilizing the process identified in SECTION 7. EVALUATION. Responses to requests for clarification must be confirmed in writing by the Bidder as instructed by the State's Procurement Official at the time of the request.
5. In the event an ambiguity or discrepancy between any of the State's Solicitation documents, is detected after the opening of bids, the State reserves the right to seek clarification and acceptance from the Bidder.
6. At the State's sole discretion, it may declare all Final Proposals to be Draft Proposals. Bidders may not protest the State's determination of all Final Proposals being declared Draft Proposals. If all proposals are declared to be Draft Proposals, the State may issue an addendum to this RFP. Should this occur, confidential discussions may be held with Bidders who are interested in continuing to be considered. Each Bidder will be notified of the due date for the submission of a new Final Proposal to the State. This

submission must conform to the requirements of the original RFP as modified by any addenda. The new Final Proposals will be evaluated as required by SECTION 7. EVALUATION.

7.3.2. REJECTION OF PROPOSALS

The State may reject any or all proposals and may waive any immaterial deviation or defect in a proposal. The State's waiver of any immaterial deviation or defect shall in no way modify the solicitation documents or excuse the Bidder from full compliance with the solicitation specifications if awarded the Contract.

7.3.3. ADMINISTRATIVE REQUIREMENTS EVALUATION

All SECTION 3. ADMINISTRATIVE REQUIREMENTS labeled with (M) are mandatory, with the exception of those Administrative Requirements in SECTION 3. ADMINISTRATIVE REQUIREMENTS labeled with (O) which are optional, and Bidders are not required to respond. Review of the proposals will begin with ensuring that the Bidder has responded to all administrative requirements, in SECTION 3. ADMINISTRATIVE REQUIREMENTS that require proposal submittal documents.

Only proposals that pass the evaluation of the mandatory SECTION 3. ADMINISTRATIVE REQUIREMENTS and SECTION 4. PROPOSAL REQUIREMENTS will proceed to cost opening. If a proposal fails to meet any mandatory requirement specified in SECTION 3. ADMINISTRATIVE REQUIREMENTS, or SECTION 4. PROPOSAL REQUIREMENTS, the State will determine if the deviation(s) is material. If the deviation is determined to be material, the Bidder will be deemed non-responsive and will be the basis for rejecting the Bidder’s proposal.

Any conflicting information will be noted as a deficiency and must be resolved to the State's satisfaction in negotiations and correct in the Bidder's BAFO.

7.3.4. QUALIFICATION REQUIREMENTS EVALUATION

The evaluation team will consider all information in the Bidder's proposal to evaluate the Bidder and Staff Qualifications. Narrative descriptions on the Bidder and Staff Qualification forms must be clear and apply directly to the solicitation requirements. Narrative descriptions may be used to validate other information provided on any form. Any conflicting information may result in the proposal being deemed non-responsive and may result in the Bidder being disqualified.

The State will evaluate Bidder and staff qualifications using the information contained in the completed ATTACHMENT 12: BIDDER QUALIFICATIONS FORM and ATTACHMENT 14.1 through 14.7 that the Bidder submits with Final Proposal. Reference contacts may be contacted to verify Bidder and Staff information and claimed experience.

To aid the State in evaluating Bidder and staff qualifications, the Bidder should use a MM/DD/YYYY format when indicating project start and end dates. If a Bidder submits a proposal in any other date format, the State will count only the whole months or years between the start and end dates. For example, Bidder "A" cites start and end dates for a project as 06/01/2018 to 05/15/2019. The Bidder or staff member would only be credited with eleven (11) months of experience.

If a project end date is ongoing or exceeds the Final Proposal due date, then the Bidder or staff member will receive credit for only the experience acquired up to the Final Proposal due date. Concurrent project timeframes (overlapping dates) will only count once for calculating the number of years and months of qualification experience for the staff.

If the number of years and months for a project was not indicated on the Bidder or staff qualification form "Experience gained on this cited Project" and the Bidder or staff checked "yes" to meeting the total experience on the project cited, then the Bidder or staff will only receive experience credit for the minimum number of years required for that requirement or will receive the number of years indicated on the header of the Bidder or staff qualification form, whichever is less.

7.3.4.1. BIDDER QUALIFICATIONS

The evaluation team will evaluate the completed ATTACHMENT 12: BIDDER QUALIFICATIONS FORM and ATTACHMENT 13: BIDDER REFERENCE FORM for compliance with the mandatory requirements specified in SECTION 4.1.1. BIDDER QUALIFICATIONS (M). The evaluation team will validate claimed experience on the associated Bidder Reference Form for each project Bidder identifies to meet the requirements.

The Bidder must provide for a minimum of three (3) projects that were successfully completed, of equivalent or greater scope to the RPSD Project and not more than five (5) projects. The Bidder must submit one (1) completed Bidder Reference Form for each of the projects cited. Bidders who do not return the required qualification forms may be deemed non-responsive.

The scoring for Bidder Qualifications is Pass/Fail.

7.3.4.2. BIDDER REFERENCES

The State will evaluate the Bidder's references using the information provided in each ATTACHMENT 13: BIDDER REFERENCE FORM. The Bidder must submit one (1) ATTACHMENT 13: BIDDER REFERENCE FORM for each project cited on ATTACHMENT 12: BIDDER QUALIFICATIONS FORM.

Each Bidder Reference Form must be signed by a reference contact who was in a Key Staff role on the referenced project. All reference forms must be returned with the proposal in order to meet the Bidder minimum experience requirements. Bidders who do not return the required reference forms may be deemed non-responsive.

Reference scores will be calculated by using the top three (3) scores among the reference forms submitted, then averaged. The average score will be divided by thirty (30) and multiplied by one hundred (100) for a total maximum awarded score of one hundred (100) points. For example, if there are three (3) total rating scores of 30, 27, and 24, from three (3) projects, the scores will be summed together to equal 81 out of a total possible score of 90. The resulting number (81) will then be divided by three (3) (the number of reference forms submitted) to equal a score of twenty seven (27), which will be divided by thirty (30) and multiplied by one hundred (100) for a final score of ninety (90).

If a reference form received a rating of "N/A" that question will not receive any points. All questions must be rated with the exception of an "N/A" rating. If any of the reference questions contain a rating of 0=Unsatisfactory, the proposal shall be deemed non-responsive and the Bidder shall be disqualified.

7.3.4.3. KEY STAFF QUALIFICATIONS

For each key staff, the evaluation team will first evaluate the completed Staff Qualification Form for compliance with the mandatory requirements specified in SECTION 4.1.3. STAFF QUALIFICATIONS (M or DS). The State will evaluate the Bidder’s Key Staff experience using the information provided in ATTACHMENTS 17.1, 17.3, 17.5, 17.7 KEY STAFF QUALIFICATION FORMS. The evaluation team will validate claimed experience on the associated ATTACHMENTS 17.2, 17.4, 17.6 AND 17.8 KEY STAFF REFERENCE FORMS for each requirement. Any conflicting information will be noted as a deficiency and must be resolved to State’s satisfaction in negotiations and corrected in the Bidder’s BAFO.

The evaluation team will next evaluate the completed Key Staff Qualification forms to ascertain whether any proposed key staff qualifies for any of the desirable scored (DS) experience points for the specific staff member. Each of the DS experience items will be worth up to one (1) point, with a total score of seventeen (17) DS experience points. The evaluation team will look at each Key Staff's Key Staff Qualification forms combined as a whole to determined the DS experience score for each item. If the State is unable to validate that the information supplied qualifies for any DS experience points, no points will be awarded for such experience. The DS experience points will be summed for the four (4) Key Staff to determine the Staff Qualification Forms - Desirables total point score.

DS scores will be calculated by totaling the ratings from each qualification form submitted. Each total rating for all the qualification forms submitted will then be summed and divided (averaged) by the total number of possible rating points and then proportionally applied to the total score points to determine the Bidder’s final evaluated total rating score. For example, if there are three (3) total rating scores of 5, 4, and 3, from three (3) projects, they will be summed together to equal twelve (12) out of a total possible score of seventeen (17). The resulting number twelve (12) will then be divided by seventeen (17) (the total desirable points available), and rounded to the nearest hundredth, for a proportion of zero point seven one (0.71). The final point total would then be zero point seven one (0.71) multiplied by two hundred (the maximum available desirable point value), and rounded to the nearest whole number resulting in one hundred forty two (142) points.

Reference contacts listed on attachments may be contacted to verify information provided by the Bidder.

7.3.4.4. KEY STAFF REFERENCES

The State will evaluate the Bidder’s Key Staff references using the information provided on each Key Staff member’s Reference Form (ATTACHMENTS 17.2, 17.4, 17.6 AND 17.8). The Bidder must submit one (1) reference form for every project cited on the Key Staff member’s Qualification Form (ATTACHMENTS 17.1, 17.3, 17.5 AND 17.7).

Each Key Staff reference form must be signed by a reference contact who performed in a Key Staff role on the referenced project.

All reference forms must be returned with the proposal submittal in order to meet the Key Staff reference requirements. Bidders who do not return the required reference forms may be deemed non- responsive and may be the basis for rejecting the Bidder's proposal.

The State may contact the reference to validate its response in accordance with the process in SECTION 7.3.4.5. BIDDER AND STAFF REFERENCE CHECKS.

All questions must be rated. If any of the reference questions contain a rating of 0=Unsatisfactory, or an answer of No, the proposal shall be deemed non-responsive and the Bidder shall be disqualified.

7.3.4.5. BIDDER AND STAFF REFERENCE CHECKS

If needed to verify either the Bidder or key staff's qualifications, the State will make two (2) attempts via phone or email to the reference contact identified on the Bidder or Staff Reference Form, to validate the claimed information and experience. The Bidder should ensure that its reference contacts are available for validation during the evaluation period identified in SECTION 2.3. KEY ACTION DATES.

If the State has not received a response from the reference contact after the first attempt, a second attempt will be made. If no response is received after the second attempt, the State will contact the Bidder and request that the Bidder assist the State by having the reference respond to the State within a 48-hour period from the second attempted contact. If the evaluators are still unable to contact the reference, the Bidder's proposal may be deemed non-responsive for failure to provide verifiable references, and the Bidder may be disqualified.

7.3.5. SOLUTION REQUIREMENTS EVALUATION

7.3.5.1. FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS

The functional and non-functional requirements identified in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS consist of Mandatory (M) and Mandatory Optional (MO) requirements. The Bidder must provide complete responses to each Mandatory (M) and Mandatory Optional (MO) requirements, as described in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS.

The State will evaluate each functional and non-functional requirement, including any reference materials to which the State is specifically directed for additional information to determine whether the response fully addresses the requirements in accordance with the following criteria:

1. All requirements marked with a priority of Mandatory will be scored as Pass/ Fail.
2. All requirements marked with a priority of Mandatory Optional will be scored as Pass/Fail.

7.3.5.2. DELIVERABLE EVALUATION (PASS/FAIL)

Bidders must respond “Yes” that it agrees to produce each deliverable identified in EXHIBIT B: DELIVERABLES TABLE. The evaluation team will evaluate Bidder’s responses to every deliverable listed in EXHIBIT B: DELIVERABLES TABLE to confirm compliance. All deliverables will be scored as Pass/Fail. If the Bidder responds with a "No" response to any deliverable, the State will note the response as a deficiency that must be resolved to the State's satisfaction in negotiations and corrected in the Bidder's BAFO.

7.3.5.3. NARRATIVE RESPONSE REQUIREMENTS (MS)

Respondents must provide a narrative describing their understanding and approach to the performance of the work described in this RFP and ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK, SECTION 15. Project (Contractor) Tasks and Deliverable Requirements.

When responding to ATTACHMENT 21: NARRATIVE RESPONSE, the Bidder shall not simply restate or paraphrase information in this RFP and the SOW. The Bidder shall describe or demonstrate, in its own words, the information required, as described below.

Narratives should explain how deliverables stated in SECTION 15. Project (Contractor) Tasks and Deliverable Requirements will be executed. The response to the ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK, SECTION 15. Project (Contractor) Tasks and Deliverable Requirements, must be completed and the Bidder must submit ATTACHMENT 17: NARRATIVE RESPONSE that includes:

1. A point-by-point response to all items and sub items included in the ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK, SECTION 15. Project (Contractor) Tasks and Deliverable Requirements of this RFP and shall not exceed one hundred (100) pages. Font size shall be Arial twelve (12) and single spaced.
2. Identify the Deliverable Number and Deliverable Title above the Narrative response for each Deliverable.
3. Description of approach, methodology and strategies of how each deliverable will be performed.
4. Description of any work items for which on-site work will be required.
5. Schedule with a timeline for each deliverable, for the project duration, including any sub tasks to complete the deliverables and due dates for each deliverable.

Note: It is the Bidder's responsibility to ensure that their narrative response to each deliverable requirement is met in full and addressed herein for the State to determine compliance to the deliverable requirements. If the State cannot determine that the Bidder's understanding and approach meets the State’s needs, the Bidder's proposal offer may be deemed non-responsive.

The Bidder's narrative will be assessed for their understanding and approach for ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK, SECTION 15. Project (Contractor) Tasks and Deliverable Requirements detailed in ATTACHMENT 17: NARRATIVE RESPONSE. The table below describes the information that the Bidder's narrative response must contain and the maximum points available for each item. The Bidder's narrative response this RFP will be scored and can achieve up to a maximum of seven hundred (700) points.

Requirement #	type	sow reference	requirement	maximum points available
1	MS	Section 15, Project Tasks and Deliverable Requirements #1	Contractor Work Plan, and RPSD Project Schedule	7
2	MS	Section 15, Project Tasks and Deliverable Requirements #2	Validated RPSD Detailed Solution Requirements and Business Process Flows	91
3	MS	Section 15, Project Tasks and Deliverable Requirements #3	RPSD Development Environment Setup and Documentation	21

Requirement #	type	sow reference	requirement	maximum points available
4	MS	Section 15, Project Tasks and Deliverable Requirements #4	RPS Database Detailed Design	49
5	MS	Section 15, Project Tasks and Deliverable Requirements #5	Web Portal detailed technical designs	56
6	MS	Section 15, Project Tasks and Deliverable Requirements #6	Web Portal Unit Test Plans	56
7	MS	Section 15, Project Tasks and Deliverable Requirements #7	Web Portal System Test Plans	14

Requirement #	type	sow reference	requirement	maximum points available
8	MS	Section 15, Project Tasks and Deliverable Requirements #8	Public Website Detailed Technical Designs	21
9	MS	Section 15, Project Tasks and Deliverable Requirements #9	Public Website Unit Test Plans	7
10	MS	Section 15, Project Tasks and Deliverable Requirements #10	Public Website System Test Plans	14
11	MS	Section 15, Project Tasks and Deliverable Requirements #11	Web Portal	175

Requirement #	type	sow reference	requirement	maximum points available
12	MS	Section 15, Project Tasks and Deliverable Requirements #12	Public Website	140
13	MS	Section 15, Project Tasks and Deliverable Requirements #13	System Transition and Knowledge Transfer Documentation	21
14	MS	Section 15, Project Tasks and Deliverable Requirements #14	Warranty	14
15	MS	Section 15, Project Tasks and Deliverable Requirements #15	RPSD System M&O	14

Mandatory scored (MS) narrative responses evaluation criteria	evaluation outcome	score
Response and supporting information: •Demonstrates in the Bidder's own words a thorough, detailed, and comprehensive understanding of the requirement. •Demonstrates the ability and intent to meet or exceed the requirement in full. •Provides evidence of proven ability to meet or exceed the requirement or detailed plans or methodology that further demonstrates how the requirement will be optimally met or exceeded. •Provides an approach that is fully achievable, applies best practices, is clearly and concisely presented, and is logically organized and well-integrated.	Exceeds (E)	100% of the max points available for that Deliverable Number
Response and supporting information: •Demonstrates in the Bidder's own words a comprehensive understanding of the requirement. •Demonstrates the ability and intent to meet the requirement in full. •Provides some evidence of proven ability to meet the requirement or detailed plans or methodology that further demonstrates how the requirement will be met. •Provides an approach that is mostly achievable, suitable, acceptably presented, sufficiently organized and integrated.	Good (G)	75% of the max points available for that Deliverable Number
Response and supporting information: •Simply repeats or paraphrases the requirement. •Meets or partially meets the RFP requirement without supporting description or literature. •Does not demonstrate that the Respondent fully understands the requirement. •Provides an approach that is not fully achievable, somewhat suitable, less than acceptably presented, somewhat unorganized, and partially integrated.	Marginal (M)	50% of the max points available for that Deliverable Number

Mandatory scored (MS) narrative responses evaluation criteria	evaluation outcome	score
Response and supporting information: •Response does not demonstrate an understanding of, or inaccurately interpreted the requirement; or •The approach is not achievable; or •The Respondent failed to provide narrative to support the requirement; or The Respondent provided a narrative that counters or softens the "Yes" response to a mandatory requirement with a statement that "intends" to support the mandatory requirement	Unacceptable (U)	0%

7.3.6. CALCULATE BIDDER PROPOSAL NON-COST SCORE

The Bidder’s non-cost score is the sum of the Bidder’s qualification requirements score plus the Bidder’s solution requirements score from the Bidder’s Final Proposal. The table below is an illustration of this process.

Table 7-2

Bidder Proposal Non-Cost Score Calculation				
Bidder	**Hypothetical** **Bidder References Forms** **Score**	**Hypothetical** **staff Qualification forms - desirable** **Score**	**Hypothetical** **Bidder narrative Solution Requirements** **Score**	**Hypothetical** **Bidder Proposal Score Summation**
A	75 points	180 points	600 points	855 points
B	80 points	200 points	700 points	980 points
C	100 points	200 points	650 points	950 points

NOTE: Point values in the example explain the calculations and have no other significance.

7.3.7. COST EVALUATION

After SECTION 3. ADMINISTRATIVE REQUIREMENTS and SECTION 4. PROPOSAL REQUIREMENTS have been evaluated, the evaluation team will open the sealed cost (Bidder's response to Volume 2) for those Bidders whose proposals have been deemed responsive and responsible. If a Bidder was determined to be non-responsive and/or not responsible during the evaluation of the administrative and bid requirements, the cost will remain unopened for that Bidder.

All cost worksheets will be validated to verify completeness and mathematical accuracy. If appropriate, errors will be corrected in accordance with SECTION 7.3.1. ERRORS IN THE FINAL PROPOSAL. After costs worksheets have been verified for accuracy, the Bidder with the lowest proposed total cost will receive the maximum score of 1000 points. All other Bidders will receive a proportionally lower score using the ratio of the lowest proposed total cost to the Bidder's proposed total cost applied to the maximum points of 1000, as shown in the Bidder cost score formula Table 7-3 below:

Table 7-3

Bidder Cost Score Formula	
$\frac{\text{(Lowest proposed total cost)}}{\text{(Bidder's proposed total cost)}}$	X 1000 points = Bidder cost score

The cost score calculation example in Table 7-4, Bidder Cost Score Calculation example illustrates that Bidder C proposed the lowest cost and received the maximum points possible.

Table 7-4

Bidder Cost Score Calculation			
Bidder	**Bidder's Proposed Total Cost**	**Calculation**	**Bidder Cost Score**

Bidder Cost Score Calculation				
A	$500,000	$300,000 / $500,000	X 1000 points	600 points
B	$400,000	$300,000 / $400,000	X 1000 points	750 points
C	$300,000	$300,000 / $300,000	X 1000 points	1000 points

NOTE: Point values in this example explain the calculations and have no other significance.

7.3.8. SOCIOECONOMIC PROGRAMS

Bidders who claim preference points will be evaluated to determine whether they submitted the required forms, documents, exhibits, and/or the responses necessary to validate their qualification and eligibility for the claimed preference(s). If the State determines that the submitted information is insufficient or that the required documents do not otherwise validate the eligibility for points in any of the claimed programs, then the points for that program will not be added to the Bidder's final overall proposal score. If the State is able to validate the Bidder's claim, the qualified preference points will be applied to the Bidder's final overall proposal score as illustrated in Table 7-7 Final Score and Rank Determination provided that the Bidder's proposal is not otherwise determined to be non-responsive to any mandatory requirements.

7.3.8.1. TACPA PREFERENCE

The State will give preferences in accordance with the GC 4530-4535.3, for bidders who are California home based and who qualify for claimed preferences under the Target Area Contract Preference Act (TACPA) by computing and returning the appropriate forms described in the RFP. Where multiple preferences are claimed, the State will verify eligibility for the preferences and evaluate and apply preferences in accordance with the law.

Available evaluation preferences under TACPA are limited to nine percent (9%), five percent (5%) worksite, and one percent (1%) up to four percent (4%) workforce of the lowest total proposal price or $50,000.00, whichever is less. The TACPA preference is a dollar preference, applied against the Bidder's proposed cost, before cost is evaluated and converted to points.

The State will verify Target Area Contract Preference Act (TACPA) preference and apply the TACPA Preference accordingly. The TACPA preference does not apply when the worksite is fixed by the terms of the Contract.

7.3.8.2. SMALL BUSINESS PREFERENCE

The State will verify Small Business/Non-Small Business preference claim and apply the five percent (5%) preference accordingly.

In accordance with Government Code §14835 et seq., bidders who qualify as a small business will be given a five percent (5%) preference for evaluation purposes only. The five percent (5%) preference is calculated on the total number of points awarded to the highest scoring non-small business that is responsible and responsive to the proposal requirements. The rules and regulations of this law, including the definition of a small business for the delivery of goods and services, are contained in the California Code of Regulations, Title 2, § 1896 et seq.

This five percent (5%) small business preference is also available to a non-small business claiming 25% California certified small business subcontractor participation. The five percent (5%) preference is calculated on the total number of points awarded to the highest scoring non-small business that is responsible and responsive to the proposal requirements and that is not subcontracting a minimum of 25% to a small business. Non-small business bidders claiming the five percent (5%) small business preference must commit to subcontract at least 25% of the net proposal price with one (1) or more California certified small businesses.

Completed certification applications and required support documents must be submitted to the Department of General Services Office of Small Business and DVBE Services (OSDS) no later than 5:00 p.m. on the Final Proposal due date, and the OSDS must be able to approve the application as submitted. Questions regarding certification should be directed to the OSDS at (916) 375-4940.

For an illustration of this process, refer to the example in Table 7-5, Small Business Preference Points Calculation. Points in this example explain the calculations and have no other significance.

The preference points for bidders A and B are based on five percent (5%) of the Bidder proposal score of Bidder C, the highest scorer of a non-small business, which is (1750.00 points) x (.05) = 87.5 points (rounded). Bidder C, which is neither a small business nor a non-small business subcontracting a minimum of 25 percent (25%) to a small business, receives no small business preference points.

Table 7-5

Small Business Preference Points Calculation				
Bidder	**Bidder Total Proposal Score**	**Small Business Preference Claim?**	**Non-Small Business Preference Claim?**	**Small Business Preference Points Awarded**
A	1,500.00 pts	Yes	No	87.50 pts
B	1,700.00 pts	No	Yes	87.50 pts
C	1,750.00 pts	No	No	0.00 pts

NOTE: Calculation is based on 5% of the Bidder with the highest "Bidder proposal score" that is a non-small business. In the example Table 7-5, Bidder C has the highest non-small business score.

7.3.8.3. DVBE INCENTIVE

In accordance with §999.5(a) of the Military and Veterans Code, for evaluation purposes only, the State shall provide an incentive to bidders who provide California-certified DVBE participation that exceeds the mandatory California-certified DVBE participation goal in the amounts shown in Table 7-6 DVBE Participation Incentive Points.

The State will verify DVBE and apply the incentive accordingly. The DVBE Incentive points are a percentage of the total possible points. The maximum incentive for this procurement is five percent (5%) of the total points available, and is based on the amount of DVBE participation confirmed. The below table is an illustration of this calculation:

Table 7-6

DVBE Participation Incentive Formula		
Confirmed DVBE Participation	**DVBE Incentive Percentage**	**DVBE Incentive Points***
≥ 5%	5%	100.00 (2,000 x .05)
4% - 4.99%	4%	80.00 (2,000 x .04)
3.1% - 3.99%	3%	60.00 (2,000 x .03)
<3%	0%	0.00

7.3.9. BIDDER FINAL SCORE CALCULATION AND RANK DETERMINATION

The evaluation team will calculate the Bidder's final score. Table 7-7, Bidder Final Score Calculation example illustrates the Bidder's final score that incorporates both preference and incentive points:

Table 7-7

Bidder Final Score Calculation					
Bidder	**Bidder Total Proposal Score**	**Small Business Preference Points Awarded**	**Verified DVBE %**	**DVBE Incentive Points Awarded**	**Bidder Final Score**
A	1500.00 pts	87.50 pts	3%	60.00 pts	1647.50 pts
B	1700.00 pts	87.50 pts	4%	80.00 pts	1867.50 pts
C	1750.00 pts	0.00 pts	5%	100.00 pts	1850.00 pts

NOTE: Bidder final score calculation in Table 7-7 is an example that explains the calculations and has no other significance.

7.3.10. SUBMISSION OF AMENDED FINAL PROPOSAL(S)

The State may require submission of an amended final proposal(s) incorporating any revisions made through the bid clarification process.

7.4. NEGOTIATIONS

The State intends to enter into negotiations as set forth in +SECTION 2.9. NEGOTIATIONS under PCC §6611.

Negotiations allow the State and Bidder an opportunity to discuss items that could, in the State's opinion, enhance the Bidder's proposal and potential for award. Negotiations are not intended to allow a Bidder to completely rewrite their proposal. The negotiations are exchanges between the State and the Bidder, which are undertaken with the intent of allowing the Bidder to revise their Final Proposal only in areas determined by the State during the negotiation process. Negotiations will be conducted either orally or in writing. These negotiations may include bargaining, such as persuasion, and alteration of assumptions and positions.

The State may discuss any aspect of the Bidder's proposal that could, in the opinion of the State, be altered or explained to materially enhance the proposal's potential for award. However, the State is not required to discuss every area where the Bidder's proposal could be improved. The scope and extent of negotiation exchanges are the matter of the State's judgment.

The State reserves the right to determine the topics for negotiation and revise the scoring criteria to the State's discretion to obtain a value effective solution.

All aspects of the Bidder's proposal are confidential until after the issuance of the notification of award.

7.4.1. PROCEEDING TO NEGOTIATIONS

At the discretion of the State, up to the top three (3) highest scoring, compliant Bidders will be determined eligible to participate in the negotiation process. At the discretion of the State, the State may invite Bidder(s) to participate in the negotiation process under the following option:

The State may invite and proceed with negotiations with up to the top three (3) highest scoring compliant Bidders. Proposal(s) will be re-evaluated and the Bidder with the highest scoring proposed may be awarded a Contract.

7.4.2. NEGOTIATION INVITATION

Once compliant bidders are determined, up to the three (3) highest scoring bidders will be notified in writing: (1) that the State is initiating negotiations pursuant to Public Contract Code 6611(a); (2) the general purpose and scope of the negotiations; (3) the anticipated schedule for the negotiations; and (4) the procedures to be followed for negotiations.

Confirmation of Attendance: Bidder(s) who have been invited to participate in negotiations must confirm attendance, in accordance with the invitation instructions, within two (2) State business days of invitation.

7.4.3. BEST AND FINAL OFFER SUBMISSION (BAFO)

At the conclusion of negotiations, the State may request a best and final offer (BAFO) submission. The intent of the BAFO is to clarify and document understandings reached during negotiations. The State will establish a date and time for receipt of the BAFOs based on when the Bidder’s BAFO negotiations occur. A Bidder’s BAFO is an irrevocable offer for one hundred twenty (120) calendar days following the scheduled date for submission of a final accepted BAFO. A Bidder may extend the offer in the event of a delay in Contract award.

BAFOs must be submitted to the location identified by the SECTION 2.2.1. PROCUREMENT OFFICER, by the specific date and time that will be communicated to each Bidder individually in writing.

The BAFO submission must address the following:

1. A supplemental proposal containing all negotiated/revised section(s) of the Bidder's original Final Proposal, any other revised area specifically required by the State to be included in the BAFO, and revisions made necessary in accordance therewith.
2. The supplemental proposal must include all changes made to negotiated section(s) of the Bidder's original Final Proposal in tracked changes. Changes to the Bidder's original Final Proposal that are not tracked in the supplemental proposal or otherwise identified may result in rejection of the proposal or cause for termination of the Contract.
3. An executive summary must accompany the supplemental proposal, identifying a list of all changes (other than non-substantive changes to formatting, punctuation, and grammar) that have been made to the Bidder's original Final Proposal. The Bidder must include and attest to the following statement within the Executive Summary:

"This Best and Final Offer (BAFO) is in response to *{RFP XXX}* and the changes identified in this executive summary represent all changes made to *{Bidder's name}* Final Proposal previously submitted to the State. Any substantive change not included in this list is non-operative, non-binding, and will not be considered a part of the {Bidder's name} BAFO."

7.4.4. EVALUATION OF BAFO SUBMISSION

The State will evaluate the BAFO submissions, based on topics negotiated and obtain the most value effective solution for the State. The State will document the evaluation process and selection criteria in its final selection documents.

7.4.5. SELECTION

Upon completion of evaluation of the BAFOs, final selection will be determined based on the responsive and responsible Bidder submitting the highest scoring (after preferences and incentives) supplemental proposal. The State reserves the right at any time to reject any or all proposals.

7.4.6. DEBRIEFING

A debriefing may be held within thirty (30) days after Contract award at the request of any Bidder for the purpose of receiving specific information concerning the evaluation. The discussion will be based primarily on the qualifications, solution requirements and cost evaluations of the Bidder's Final Proposal. A debriefing is not the forum to challenge the solicitation specifications or requirements.

8. INFORMATIONAL ATTACHMENTS

The following attachments to this solicitation are informational for use in the solicitation process and do not need to be submitted with the Bidder's proposal response. They can be found in +PART 2 - BIDDER RESPONSE:

1. ATTACHMENT 15: TEMPLATE FOR QUESTION SUBMITTAL. This attachment provides the format for a Bidder to submit questions regarding this solicitation.
2. ATTACHMENT 16: SOLICITATION SUBMISSION CHECKLIST. This attachment references items to be submitted as part of the Final Proposal submission but is not guaranteed to include all necessary items.
3. EXHIBIT J: GLOSSARY OF TERMS. This Exhibit includes definitions, acronyms and abbreviations for terms used in the solicitation and in the SOW.

ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK

Request For Proposal RFP

21ITS0716

PART 2 – BIDDER RESPONSE

FOR

Renewables Portfolio Standard Database System (RPSD) Expansion Project– Implementation Services

June 15, 2022

Issued by:

STATE OF CALIFORNIA

California Public Utilities Commission

California Public Utilities Commission, 505 Van Ness Avenue, San Francisco, CA 94102

Part 1 of the solicitation template contains the Bidder and bidding instructions, proposal form instructions, solution requirements and instructions, and all other instructional/ compliance information that the Bidder must meet in order to be considered responsive and responsible to the solicitation.

Part 2 of the solicitation template contains all forms a Bidder must complete and return with its Final Proposal, including administrative forms, qualification forms, requirement responses and all exhibits/attachments discussed in Part 1.

Disclaimer: The original PDF version and any subsequent solicitation addendums released by the Procurement Official of this solicitation remain the official version. In the event of any inconsistency between the Bidder's versions, articles, attachments, specifications or provisions (which constitute the Contract), the official State version of the solicitation in its entirety shall take precedence.

1. Background and Purpose

California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. Established in 2002 and subsequently revised (established through Senate Bill 1078, accelerated in 2006 under Senate Bill 107, expanded in 2011 under Senate Bill 2(1x), enhanced in 2015 by Senate Bill 350 and Senate Bill 697, and accelerated and increased in 2018 by Senate Bill 100), the RPS program requires investor-owned utilities (IOUs), publicly owned utilities (POUs), electric service providers (ESPs), and community choice aggregators (CCAs) to increase procurement from eligible renewable energy resources to 60% of total procurement by 2030 with interim targets of 40% by December 31, 2024, and 52% by December 31, 2027 (refer to Public Utilities Code 399.11- 399.32).

The California Public Utilities Commission (CPUC) has oversight authority for IOUs, CCAs, and ESPs whereas the California Energy Commission (CEC) has oversight authority for POUs.

The creation of the RPS Database (RPSD) was initiated in order to store and track project information collected from the three (3) large IOUs. The RPS Program has several reporting requirements that facilitate the need for the large IOUs to submit data to CPUC Energy Division staff. The RPSD is also intended to simplify the IOU submission process and ensure completeness and accuracy of the reported project data which can change monthly. The RPSD enables CPUC Energy Division staff to respond to an increasing number of internal and external stakeholder data requests that are used to track California’s progress toward renewable energy goals, renewable procurement decisions, and integrated resource planning.

Following the enactment of Senate Bill 697 and Senate Bill 350 in 2015, new RPS tracking, compliance, and reporting requirements created the need for additional functionality and user interfaces.

The purpose of this ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK is to hire an implementation Contractor to replicate and expand the functionalities of the existing RPSD System as per the documented SECTION 7. Solution Requirements.

2. Objective

TBD, hereinafter referred to as the "Contractor," agrees to provide the California Public Utilities Commission (hereinafter referred to as "CPUC" or “State”) with implementation and Maintenance and Operations (M&O) services for the Renewables Portfolio Standard Database System (hereinafter referred to as "RPSD System").

The RPSD Project objectives are described in this section.

2.1.1 Expand the RPS data collection beyond California’s three (3) large IOUs to include CCAs and ESPs by enabling the approved external users drawn from the electricity retail sellers in California to:

- Upload, validate, store and query geographic information system (GIS) shapefiles for existing RPS projects and for RPS offers (an offer is a new RPS project that bids into IOU procurement solicitations, but not yet selected);
- Upload, validate, and store additional data files related to RPS procurement plan and RPS compliance report; and
- Query and download historical datasets submitted by their respective organizations.

2.1.2 Provide capability for new users from California’s electricity retail sellers to request an account/login using the web portal; capability for related workflow and notifications for CPUC Energy Division staff to review, approve or reject the request; and for the system to create and activate new user logins as required.

2.1.3 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 Energy Division staff or managers.

2.1.4 Provide a public interface/website to allow the general public to access the information in the RPSD system including, but not limited to, exporting public RPS contract information in the form of graphs and charts using the data collected by the RPSD.

2.1.5 Provide RPSD interfacing capability for the CPUC Energy Division 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. Description of Proposed New System or Service

The RPSD System will include a database, web portal, and a public website.

3.1 The RPSD System will be custom developed by building upon a copy of the current RPSD System and expanding to cater to the documented detailed solution requirements.

3.2 The current RPSD System, comprising a database and web portal, was custom developed using Python/Django web framework and PostgreSQL database in an Amazon Web Services (AWS) GovCloud environment. The RPSD System currently runs in a CPUC owned AWS GovCloud account. The web portal https://rps.cpuc.ca.gov is accessible by CPUC Energy Division staff, the three large California IOUs (PG&E, SCE, and SDG&E), and the IT Contractor. The web portal will use the same technical architecture as the current web portal with two exceptions (1. PostGIS component, 2. System interfaces for data visualizations). Additionally, the CPUC Energy Division staff can also access the database using a PostgreSQL plug-in through a Tableau client software.

3.3 The CPUC prefers to use web portal's technology platform for public website for ease of maintenance. However, the technology stack along with architecture of the public website will be decided during System designs and must be approved by the CPUC. Both the web portal and public website shall use a common PostgreSQL database and AWS S3 datafile system for accessing the RPS data.

3.4 The RPSD System will have the following additional components:

- The PostGIS extension to the PostgreSQL database will facilitate storing the uploaded shapefiles in geographical data format.
- A public website will provide public access to non-confidential RPS data over the web. The website will provide capability to query, download, and visualize RPS data. The website will have interactive Tableau workbooks, which are created using a snapshot of RPS data (point in time data), will be periodically refreshed,

and be embedded into the web pages. This public website will be modeled after California Solar Initiative's distributed generation statistics website whose URL is: https://www.californiadgstats.ca.gov/.

3.5 The extended web portal will provide secure access to an expanded user base drawn from electricity retail sellers (CCAs, ESPs, single and multi-jurisdictional utilities [SMJUs]).

3.6 New Web Portal Capabilities

3.6.1 Data submission capability of additional categories of data include:

- RPS Compliance Report based on predefined CPUC Template
- RPS Procurement Plan based on predefined CPUC Templates
- Shapefiles containing GIS data of the RPS projects and Offers
- Confidentiality Declaration
- Attestation of data submitted

3.6.2 Secure query access and download capability of historical data submissions by the respective entities

3.6.3 GIS data visualization capability (as maps and attributes over a chosen base map)

3.6.4 New account/login request capability

3.6.5 Data confidentiality rules enforcement capability

3.6.6 Role based and organization based data access control capability

3.7 Database Interfaces

3.7.1 Configure/allow database access via Tableau client for CPUC Energy Division staff to access RPS data for analysis and reporting

3.7.2 Provide RPS database access for an Energy Division data warehouse program, written in Python, to access additional RPS datasets

3.7.3 Configure/allow access to non-confidential RPS data via Tableau client for CPUC Energy Division staff to design, create and publish interactive tableau workbooks to https://public.tableau.com using a snapshot of non-confidential RPS data. The tableau workbooks are to be embedded in the public website for interactive data visualization experience. Limited database access is required, for the CPUC Energy Division staff role(s) that are used to create the interactive Tableau workbooks, to prevent publishing confidential RPS data to the public.

4. Term of the Contract

Effective upon approval of the California Department of Technology (CDT), Statewide Technology Procurement (STP), defined as the Effective Date, the term of the Contract is two and one half (2 1/2) years, with two (2) optional one (1) year extensions for a total maximum Contract term of four and one half (4 1/2) years. The CPUC at its sole discretion, will determine if an optional extension year will be exercised at the rates specified in EXHIBIT C: COST WORKSHEETS.

The initial period of performance for this Contract shall be from Contract execution through deployment, which is expected to last a maximum of one and one half (1 1/2) years, plus one (1) year of warranty and one (1) year of M&O after acceptance, running concurrently.

The Contractor shall not be authorized to commence services described in this Contract prior to the Contract Effective Date. Any performance of services by the Contractor commenced prior to the Effective Date shall be at no cost to the State.

5. Amendment

The Contract may be amended, consistent with the terms and conditions of the Contract, and by mutual consent of both parties, subject to approval by the CDT STP under Public Contract Code (PCC) Section § 6611 et seq. No amendment or variation of the terms of this Contract shall be valid unless made in writing, signed by the parties, and approved by oversight agencies if required. No oral understanding not incorporated in the Contract is binding on any of the parties.

6. Contract Representatives

If either CPUC or Contractor requires a change of contact, a written notification will be provided to the other party within five (5) State business days.

The project representatives during the term of this Contract shall be:

6.1 Business Project Manager (PM)

The Business PM shall be the primary interface with the Contractor.

PROJECT MANAGER CONTACTS			
State:	California Public Utilities Commission	Contractor:	To Be Determined
Name:	To Be Determined	Name:	To Be Determined
Address:	505 Van Ness Avenue, San Francisco, CA 94102	Address:	To Be Determined
Phone:	To Be Determined	Phone:	To Be Determined
Email:	To Be Determined	Email:	To Be Determined

6.2 IT Project Manager (PM)

IT Project manager			
State:	California Public Utilities Commission	Contractor:	To Be Determined
Name:	Jagadeesh Katragadda	Name:	To Be Determined
Address:	505 Van Ness Avenue, San Francisco, CA 94102	Address:	To Be Determined
Phone:	To Be Determined	Phone:	To Be Determined
Email:	To Be Determined	Email:	To Be Determined

6.3 IT Contract Administrator

All contract inquires shall be directed to:

IT CONTRACT ADMINISTRATOR			
State:	California Public Utilities Commission	Contractor:	To Be Determined
Name:	Wendy Bright	Name:	To Be Determined
Address:	400 R Street Sacramento, CA 95811	Address:	To Be Determined
Phone:	To Be Determined	Phone:	To Be Determined
Email:	To Be Determined	Email:	To Be Determined

7. Solution Requirements

RPSD System detailed solution requirements are categorized as Functional, Non-Functional, and Transition requirements; and are available in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS. Additional supporting documents that expand on the detailed solution requirements, containing Business Process Flow Charts, Screen mock-ups, and Requirements Overview presentation are available in the RPSD project repository.

8. State Data Center or Contractor Hosted Facility Environment

8.1 Solution Hosting

The RPSD System must be hosted by Amazon Web Services (AWS) through the CPUC's AWS GovCloud account. AWS GovCloud provides all necessary virtual infrastructure, including servers, network, relational database service (RDS), data storage, system configuration utilities, identity management, and monitoring tools, as well as a disaster recovery management tool, AWS CloudEndure. AWS is compliant with System and Organizational Controls (SOC), Federal Risk and Authorization Management Program (FedRAMP), and International Organization for Standardization/ International Electrotechnical Commission (ISO/IEC). AWS provides consultation to review customer applications' security requirements and designs via engaging an AWS Solutions Architect or by participating in "Ask an Expert" program. Additional information related to AWS compliance with Information Security Standards may be found on the AWS Website https://aws.amazon.com/security.

8.2 System Configuration

The RPSD Production System must employ a load balancer and incorporate a scalable configuration with a minimum/maximum and step parameters to define the scalability of web servers. The current RPSD production System employs the following for scalability:

- Minimum = two (2)
- Maximum = three (3)
- Step = one (1) (minimum two [2] servers at all times, scaling up to three [3] servers and scaling down to two [2] servers based on system load)

The RPSD production System must be accessible during the specified times (web portal must be accessible during State business hours; public website must be accessible during the required hours defined as 3:00 AM to 11:00 PM Pacific Time [PT]) except during scheduled outages and emergency shutdowns.

The Contractor and the CPUC are responsible for the cost controls of RPSD AWS environments. The initial System configuration and subsequent changes must be analyzed for cost. The CPUC AWS account manager must be informed about the configuration and the cost analysis.

The System configuration for each of the following environments: production, pre-production, and testing (when doing load testing) must meet or exceed the specifications for the existing RPSD System.

Table 8-1: Current RPSD System AWS Configuration

Description	AWS Instance Type	Number of processors @ frequency	Number of cores	Installed RAM	attached storage
Web Portal	EC2 Server (t3.small) - two (2) servers	1 CPU	2	2 GB	30 GB
Database	RDS (db.t3.small)	1 CPU	2	2 GB	50 GB
Backup Storage (35 days)	AWS S3	N/A	N/A	N/A	N/A

In addition, the RPSD Production System must be configured for disaster recovery using AWS CloudEndure.

8.3 System Operation Schedule

Upon delivery, the RPSD System must be accessible to all users during the specified times as stated above in 8.2. During scheduled downtime the web portal and public website must provide information about the System status and expected time of availability.

9. State’s Roles and Responsibilities

9.1 System Infrastructure

9.1.1 The CPUC will provide an AWS GovCloud Account for creating RPSD System environments for Development, Testing, Training, Pre-Production, and Production.

9.1.2 The CPUC will provide Tableau Designer/Creator licenses for the CPUC Energy Division staff and for two (2) Contractor team members for the duration of the Contract. The CPUC Energy Division staff and the Contractor will develop the Tableau interactive reports/workbooks and upload them to Tableau Public (https://public.tableau.com).

9.1.3 The CPUC will pay for supported versions of Open Source Software (e.g., Anaconda for Python), if used, and are not provisioned through AWS.

9.1.4 The CPUC will pay for GitHub subscription for the RPSD team, the Contractor team, and the oversight team (IV&V vendor and CDT Consultant).

9.1.5 The CPUC will be responsible for AWS service charges for:

- Consulting with an AWS expert for RPSD System architecture review
- AWS Support charges for conducting RPSD System penetration testing
- AWS Support subscription

9.1.6 The CPUC will be responsible for approving or rejecting infrastructure costs not covered in this section, prior to their use in the RPSD Project.

9.2 CPUC RPSD Team

9.2.1 The CPUC will provide the Contractor with access to RPS Program SMEs, RPSD System stakeholders, the IT Business Analyst (BA), and Information Security specialists for interviews and meetings as needed.

9.2.2 The CPUC will assign a Business PM for consultation and reporting. The Business PM will coordinate the work of other assigned SMEs.

9.2.3 The CPUC will assign an IT BA and SMEs during requirements validation, collaboration/consultation during System designs, design reviews, test plans review, and test results review.

9.2.4 The CPUC RPSD team will conduct the User Acceptance Testing (UAT).

9.2.5 The CPUC RPSD team and the RPSD Project oversight team will review all Contractor deliverables, provide feedback, and log defects for corrective action by the Contractor.

9.2.6 The CPUC will assign an IT PM to coordinate the work of the CPUC RPSD team, to maintain the RPSD Master Project Schedule, and to manage Contractor interactions with CPUC Information Security Office as well as any other CPUC IT back-end service teams.

9.2.7 The CPUC will assign a Contract Administrator to respond to any questions regarding Contract language and amend the Contract, if necessary.

9.2.8 The CPUC will organize a Change Control Board (CCB) for decisions pertaining to Change Control.

9.3 RPSD Project Oversight Team

9.3.1 IV&V Vendor

The CPUC will assign an IV&V vendor to the RPSD Project.

9.3.1.1 The IV&V vendor will report to CPUC Business PM.

9.3.1.2 The CPUC will coordinate between the RPSD Contractor and the IV&V vendor for access to the required project artifacts listed below:

- Technical Designs
- Configurations
- Documentation
- Implementation Plans
- Development
- Testing and Deployment Procedures
- Source Code Access
- Test Plans
- Test Results
- Defects log
- Change Requests
- Impact Assessments

9.3.1.3 The IV&V vendor will review the RPSD Project artifacts, design and development processes and procedures, test plans, test results, and deployment procedures to provide feedback and recommendations for any corrective action.

9.3.2 Independent Project Oversight Consultant (IPOC)

The CPUC will assign an IPOC, from CDT, to the RPSD Project.

9.3.2.1 The IPOC will report to RPSD Project Sponsor(s) and to the CPUC Chief Information Officer (CIO).

9.3.2.2 The IPOC will submit a monthly report as to the health of the RPSD Project and any recommendations for corrective action.

9.3.2.3 All RPSD Project team members will cooperate with the IPOC, provide the required inputs for analysis, and answer questions related to the implementation of the RPSD Project.

10. Contractor's Roles and Responsibilities

The Contractor's role is to carry out the provisions contained in ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK within the defined Scope, Budget, and Schedule.

10.1 The Contractor shall provide its own equipment, tools, supplies, and services necessary for its team to perform the required duties.

10.2 The Contractor shall designate a primary contact person to whom all Project communications may be addressed to and has the authority to act on all aspects of the Contract.

10.3 The Contractor shall also provide an Account Manager and a Service Desk/ Contact for reporting system incidents as specified in SECTION 35. Service Level Agreements (SLAs).

10.4 The Contractor shall adhere to the State policies and procedures, guidelines, templates, System access, building access, and security requirements in SECTION 19. Information Security Provisions.

10.5 The Contractor shall provide proof of insurance required as stated in SECTION 33. Insurance Requirements.

10.6 All the Contractor-owned or managed laptops, Ultra books, net books, tablets, Smart phones, and similar devices shall be encrypted using commercial third-party encryption software. The encryption software shall meet the level of standards of the National Institute of Standards and Technology (NIST) Federal Information Processing Standards (FIPS) Publication 140-2, Security Requirements for Cryptographic Modules. Additionally, antivirus and/or antimalware software shall be used and kept up to date along with software patches and supported versions. The CPUC Information Security Office (ISO) shall have the right to audit the Contractor-owned devices connected to State networks.

10.7 If the Contractor uses removable media storage devices (e.g., Universal Serial Bus [USB] thumb drives, disk tapes, micro SD, SD cards, CD/DVD) to store State information then, all electronic files, shall be encrypted using a commercial third-party encryption software. The encryption software shall meet the standards set forth in NIST FIPS 140-2, Security Requirements for Cryptographic Modules. Information stored on approved removable storage devices shall not be copied to any unencrypted computer (e.g., desktop or laptop) not connected to the State network. Any confidential information shall be encrypted when stored on State network file shares or document repositories.

10.8 The Contractor shall work with the CPUC Business PM, and coordinate with all project staff as necessary.

10.9 All work products and deliverables shall be stored on the RPSD document repository (Content Server for final products, and SharePoint for work-in-progress items) in a format compatible with CPUC document standards. The most current version of all work products and deliverables shall always be continuously available for CPUC review. The code repository may be maintained in a version control system such as GitHub, but a copy must be available for review on CPUC content server for reviews after each logical break and at the end of every week.

10.10 The Contractor shall follow the Software Development Life Cycle (SDLC) methodology and perform iterative testing/reviews to ensure the work products are error free.

10.11 The Contractor shall be responsible for the M&O of the deployed RPSD System as defined in SECTION 31. Maintenance and Operations (M&O).

10.12 The Contractor shall return all RPSD Project property, such as security badges prior to the Contract term end date and/or termination.

10.13 The Contractor shall complete all deliverables listed in SECTION 15. Project (Contractor) Tasks and Deliverable Requirements.

10.14 The Contractor must establish a method for defect logging, tracking and closure during the development, testing, and deployment of the RPSD System. The process must be clearly defined and approved by the CPUC. The software used must be in compliance with Section 22.3.2.

Post implementation defect logging shall be handled as detailed in SECTION 31. Maintenance and Operations (M&O).

11. Key Staff Qualifications and Skills

11.1 Key Primary Roles

All the following Key primary roles are required as part of the project:

- One (1) Project Manager role
- Three (3) Technical Lead roles:
    - Web Application Development Lead
    - Back-End Lead
    - Testing/QA Lead

Each of the above roles must have a completed Key Staff Qualification Form and Key Staff Reference Form.

Any changes or replacement of the Key Staff assigned to the primary roles identified above must follow the process in SECTION 12. Key Staff Changes.

The Contractor may identify additional staff for the project once the Contract is awarded and the project begins. These additional staff may be added at various stages of the project depending on the Contractor's staffing needs. All work performed by additional staff must be reviewed and approved by one (1) of the Technical Leads identified above. The assigned primary Technical Lead, for the respective area, will be responsible for supervising the work of the additional staff to ensure the quality of work. The Contractor is fully responsible for additional staff that are assigned to work under the Leads.

11.2 Project Manager (PM)

11.2.1 Responsibilities

The Contractor's PM will be ultimately responsible for the delivery of all work products, and for coordinating all implementation activities required to deliver the RPSD System. These include requirements validation, technical designs, environments setup, system configurations, development, testing, integration, documentation, user training, data migration, and deployment activities related to the RPSD System delivery as per the documented requirements and this SOW. The Contractor's PM must interact with the CPUC RPSD Team, IPOC, and the IV&V vendor and respond to any questions, as part of the RPSD Project implementation.

11.2.2 Work Experience

This classification requires a minimum of:

- Five (5) years of broad and extensive IT Project Management experience
- Two (2) years shall have been in the lead PM role when multiple PMs are involved, or in the PM role when only one IT PM is involved in managing the Project
- The PM must have a minimum of five (5) years of experience in implementing web application development projects utilizing Python/Django web framework and AWS Cloud/AWS GovCloud infrastructure in a Technical Lead or PM role

11.2.3 Education

This classification requires a minimum of:

- A bachelor's degree or an equivalent University degree
- A Project Management Professional certification

11.2.4 Desired Qualifications

Desired qualification include:

- Experience working with CPUC or related State agencies (California Energy Commission, California Air Resources Board, California Environmental Protection Agency)
- Knowledge of electric utility regulation in the State of California and RPS Program goals

11.3 Web Application Development Lead

11.3.1 Responsibilities

The Web Application Development Lead (or Development Lead) will be responsible for:

- Reviewing and validating RPSD System requirements
- Designing and developing the software and associated documentation for each RPSD System component (web portal, public website, and integrations)
- Providing input to the RPSD data model and database design
- Embedding Tableau interactive workbooks into web pages
- Coding and peer reviews of code developed in Python/Django, HTML, CSS, JavaScript, JQuery, SQL, and Bootstrap
- Coding and peer reviews of Linux Shell Scripts
- Managing GIS/shapefile data using PostGIS data types
- Creating shapefile data visualizations (maps) in web pages
- Overlaying data visualizations on chosen base maps
- Integrating interactive web pages with map services/APIs
- Coordinating the work of other Contractor staff that are assigned to work under the Development Lead's supervision and the Quality of the overall work products
- Providing Testing and Deployment Support for the RPSD System components.
- Providing Production Support for the RPSD System that involve the Web Applications or their interfaces
- Communicating and coordinating with the CPUC regarding the development of

the RPSD System components
- Reviewing Change Requests (CRs) and performing Impact Assessments of CRs
- Implementing approved CRs that pertain to the web portal changes, public website changes, or interfaces (Tableau, map services, or others) for these two web applications

11.3.2 Work Experience

This classification requires a minimum of:

- Five (5) years of broad and extensive web application design/development experience
- Three (3) years of experience in implementing web application development projects utilizing Python/Django web framework, and AWS Cloud/AWS GovCloud infrastructure
- Five (5) years of working with relational databases
- Three (3) years working with PostgreSQL database, designing, and developing interactive web based database applications
- One (1) year of work experience leading and supervising technical personnel, in the design, development, testing, deployment, and maintenance of web based interactive database applications running on cloud infrastructure

11.3.3 Education

This classification requires the following education and professional certifications:

- A bachelor's degree or higher in any of the following areas: computer science, engineering, business, physics, or mathematics
- Certified Web Developer or Solution Architect
- Certified Python Programmer

11.3.4 Desired Qualifications:

- Experience working with CPUC or related State agencies (California Energy Commission, California Air Resources Board, California Environmental Protection Agency)
- Experience working with PostGIS
- Experience working with Tableau

- Experience working with mapping APIs
- Knowledge of electric utility regulation in the State of California and RPS Program goals

11.4 Back-End Lead

11.4.1 Responsibilities

The Back-End Lead will be responsible for:

- AWS resource provisioning, setting up, documenting, and maintaining the RPSD Development, Testing, UAT, Training, Pre-production, and Production environments
- Packaging web applications as Docker containers and deploying them in AWS GovCloud environments
- Setting up the GitHub source code version control environment for the RPSD Project and providing development procedures to the Contractor staff
- Assigning tasks and supervising other staff members, who are assigned to work under the supervision of the back-end lead, in delivering a quality product
- Communicating and coordinating with the CPUC regarding their responsibilities
- Leading the following activities:
    - Data modeling
    - Data conversion and migration design and development
    - System Interfaces design and development (including automation scripts)
    - Managing user access permissions and setting up database interfaces
    - Implementing other non-functional requirements
    - Testing support
    - System deployment and verification
    - Impact assessment of CRs that impact any back-end components and help implement solutions
    - System (database and network) performance tuning
    - Production support involving back-end components
    - Create documentation for the System environment set up, back-end components technical design, deployment procedures, and operations manual

11.4.2 Work Experience

The Back-End Lead classification will require a minimum of:

- Five (5) years of experience as a technical lead/back-end lead responsible for all back-end or server-side activities in custom software implementation projects involving SDLC processes, relational databases, and 3-tier/n-tier architectures.
- Two (2) years of experience using and administering GitHub, a cloud based source code version control and build platform
- Three (3) years of experience in PostgreSQL database administration, version upgrades, performance tuning, data modeling, schema design, capacity planning, database programming, and data migration
- Three (3) years of experience in Python/Django scripting or web application development
- Three (3) years of experience in Linux utilities and server-side programming and scripting
- Three (3) years of experience in AWS Cloud/AWS GovCloud platform and must have performed architecture design, resource provisioning, resource configuration or environment setup, web applications deployment, and systems monitoring & control
- One (1) year of experience leading and supervising other technical personnel in the implementation and maintenance of IT/Software applications running on AWS Cloud/AWS GovCloud infrastructure.

11.4.3 Education

The Back-End Lead must have the following qualifications:

- A bachelor's degree or higher in any of the following areas: computer science, engineering, business, physics, or mathematics
- A PostgreSQL database developer or administrator certification
- An active AWS Professional Solution Architect certification or AWS Solutions Architect - Associate certification throughout the Contract. If the Certification expires during the Contract, the Back-End Lead must re-certify within one (1) month of expiration

11.4.4 Desired Qualifications

- Experience working with CPUC or related State agencies (California Energy Commission, California Air Resources Board, California Environmental Protection Agency)
- Experience working with PostGIS
- Experience working with Tableau
- Experience working with mapping API's
- Knowledge of electric utility regulation in the State of California and RPS Program goals

11.5 Testing/QA Lead

11.5.1 Responsibilities

- The Testing/QA Lead will coordinate test planning, creation of Testing environments for interactive testing, data/environment refreshes for iterative testing, documenting test plans, executing test plans, issue tracking, and issue resolution.
- The Testing/QA Lead will be responsible for any communications or coordinating with the CPUC regarding System testing.
- The Testing/QA Lead will participate in System technical designs or review the System technical designs to get input for creating System and Integration Test Plans.
- The Testing/QA Lead will lead and supervise the following activities to deliver a quality work product:
    - Review System requirements and System designs
    - Review unit test plans
    - Create System test plans, integration test plans
    - Create test data
    - Test RPSD System components (database, web portal, and public website) as per the System test plans
    - Test data conversion/migration scripts and validate data migration by comparing the RPSD System data with the legacy system data
    - Test interactive Tableau workbooks and Tableau Server Integrations with the web portal’s web pages and public website’s web pages
    - Test interfaces and batch processes
    - Perform end-to-end testing

- Create system test plans for approved CRs based on the CR description, impact assessments, and solution designs
- Develop test scripts for automated testing and regression testing
- Conduct security testing
- Conduct performance testing/load testing
- Conduct deployment testing and PIV testing
- Query the database to analyze data
- Create status reports, and testing completion reports

11.5.2 Work Experience

The Testing/QA Lead classification will require a minimum of:

- Five (5) years of work experience as a Testing/QA Lead in custom web application software development projects and/or implementing web based modified-off-the-shelf software (MOTS) projects
- Three (3) years of work experience in creating System Test Plans and Integration Test Plans for web based interactive database applications
- Three (3) years of demonstrated experience in testing Web Applications developed using Python/Django web framework, PostgreSQL database, and AWS Cloud/GovCloud platforms
- One (1) year of work experience leading and supervising System testing staff, in System testing web based interactive database applications running on AWS Cloud/AWS GovCloud infrastructure
- One (1) year of experience with GitHub source code version control and build platform for code management
- One (1) year of experience in developing test scripts for automated testing

11.5.3 Education

The Testing/QA Lead classification will require a bachelor's degree or higher in any of the following areas: computer science, engineering, business, physics, or mathematics.

11.5.4 Desired Qualifications

- Experience working with CPUC or related State agencies (California

Energy Commission, California Air Resources Board, California Environmental Protection Agency)
- Experience testing web applications that have PostGIS and geospatial data components
- Experience testing web applications that have Tableau integrations
- Experience testing web applications that have integration with mapping APIs
- Knowledge of electric utility regulation in the State of California and RPS Program goals

12. Key Staff Changes

The Contractor shall not add/or substitute Key Staff without the prior written consent of the State, which consent shall not be unreasonable withheld. The Contractor shall make every reasonable effort to provide suitable substitute Key Staff. The additional and/or substitute Key Staff must meet all the requirements and must be approved in writing by the State prior to the substitute Key Staff beginning work.

12.1 State's Right for a Change in Key Personnel

The State reserves the right to have the Contractor replace Key Staff at any time, such right shall not be exercised unreasonably. The State shall notify the Contractor in writing when exercising that right and include the reason for the replacement. In this event, the Contractor shall provide a proposed replacement within thirty (30) business days of such notification. The Contractor must provide a replacement resource as defined in SECTION 7.3.4.3. KEY STAFF QUALIFICATIONS.

12.1.1 The substitution of Key Staff shall require a written approval of the Business PM.

12.2 Existing Key Staff Change Process

12.2.1 The Contractor shall notify the State, in writing, within five (5) business days of any changes in the Key Staff assigned to the project deliverables by completing EXHIBIT F: KEY STAFF CHANGE ORDER REQUEST FORM, applicable EXHIBIT G: KEY STAFF QUALIFICATIONS FORM with a resume, and EXHIBIT H: KEY STAFF QUALIFICATIONS REFERENCE FORM. If a Contractor employee is unable to perform due to illness, resignation, or other factors beyond the Contractor's control, the Contractor shall make every reasonable effort to provide suitable substitute personnel within ten (10) business days. The substitute personnel shall possess equal or better qualifications than the replaced personnel, meet all requirements, and be approved in advance of any performance under the Contract by the Business PM.

12.2.2 The State shall provide written approval or denial of the request within ten (10) business days after receipt of these documents.

12.3 Contractor's Compliance Requirement

If any of the proposed replacement Key Staff are rejected and a qualified replacement is not provided to the State for approval within ten (10) State business days of the rejection, the Contractor will be in material breach of the Contract unless the State provides an extension in writing before the deadline is exceeded.

12.4 Onboarding Replacement Staff and Related Costs

The State shall not compensate the Contractor for any time or effort required to prepare a new Key Staff for performing tasks on the Project.

13. Escalation Process

13.1 Escalation Contacts

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 CPUC's attention. Problems or issues shall be reported in the next status meeting, a monthly status report and/or via the project issue reporting system accessible by the CPUC. The CPUC 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 CPUC personnel include, but are not limited to, the following:

Level	Name/Title	Email	Phone
First	To Be Determined Business Project Manager	To Be Determined	To Be Determined
Second	Nathan Lubega Lead Subject Matter Expert	To Be Determined	To Be Determined
Third	Wendy Bright IT Contract Administrator	To Be Determined	To Be Determined

13.2 Escalation Process

Issues may be reported to the CPUC Business PM via Status Reports or recorded in the Project Issue Log by any of the Project Team members, or Stakeholders. The issue log will be reviewed by the CPUC (Lead Subject Matter Expert and PM) during project review meetings. The issues will be prioritized for resolution based on the short-term and long-term impact on the project. When an issue pertains to a Contract dispute such as the terms and conditions, or compliance, then the IT Contract Administrator will review the issue and consider an appropriate response to resolve the issue.

When an issue needs escalation, the CPUC Business PM will inform the Executive Steering Committee (ESC). The escalation steps are as follows:

13.2.1 Issue is reviewed by the CPUC Project Team to confirm or reject the issue as follows:

1. Resolved as not an issue with explanation as to why it is not considered an issue with references to Project Artifacts (documents, decisions, meeting minutes); or

2. Resolved as duplicate or subordinate to an existing issue which will go away when the original issue is resolved; or
3. Recognized as an issue and assigned a Priority, Severity, and an owner to work on detailed analysis.

13.2.2 The recognized issues are grouped under appropriate categories.

13.2.3 The issue will be analyzed for root cause, impact, and solution.

13.2.4 Open issues will be reviewed at all status meetings until resolved.

14. Change Control Procedures

14.1 CR Initiation

A CR may be created, during the Contract period, when any of the following conditions are met:

- A gap is discovered in the requirements and a CR is needed to fill the gap and fulfill the Deliverables of the RPSD Project; or
- There is a new statutory or legislative requirement that impacts the RPS data collection or reporting; or
- There are new requirements from RPSD stakeholders which cannot be postponed until the completion of the Project for later consideration during M&O.

14.2 Change Control Board (CCB) Organization & Approval Authority

14.2.1 The CCB is comprised of the following individuals:

- CPUC Business PM (who chairs the CCB)
- CPUC Lead SMEs
- CPUC IT BA
- CPUC IT PM (non-voting member)
- Contractor team (PM and Technical Leads), all are non-voting members, due to potential conflict of interest with CCB decisions
- IV&V Vendor (non-voting member) - attends when requested
- CPUC IT Contract Administrator (guest member) - attends when requested
- CPUC Information Security Officer (guest member) - attends when requested

- CPUC Enterprise Architect (guest member) - attends when requested
- CPUC AWS Account Manager (guest member) - attends when requested

14.2.2 The CCB is authorized to deliberate on CRs and decide, either approve or deny, when the cumulative impact of all approved CRs including the current CR under consideration does not lead to more than five percent (5%) variance in the approved Project scope, schedule, and budget.

14.2.3 The CCB will defer the decision to Project Steering Committee (PSC) when the cumulative impact of all approved CRs, including the current CR under consideration, causes more than five percent (5%) variance in approved Project Scope, Schedule, and Budget.

14.3 Change Control Governance Process

14.3.1 CR Creation

The RPSD Project team (CPUC Staff or Contractor) creates the CR and logs it in a CR Log.

14.3.2 CR Review and Approval Process

The CR will go through the following review and CCB approval process:

1. The Contractor must review the CR within five (5) State business days after receipt.
2. The Contractor documents preliminary assessment of the CR for the CCB consideration. The CR analysis and impact assessment are done to arrive at a preliminary effort estimate. If the CR review and analysis takes more than eight (8) hours of work effort, the Contractor must notify the CPUC Business PM.
3. The CCB authorizes detailed impact assessment, when requested.
4. The Contractor performs detailed impact assessment, including effort estimates, incremental costs, and incremental delays.
5. The CPUC documents the cumulative variance (budget, schedule, and scope) from baselines.
6. If the CR needs approval prior to the next CCB meeting, an ad-hoc CCB meeting will be scheduled by the RPSD IT PM.
7. The CCB issues a decision to approve or revoke the CR, or to recommend

conditional approval based on variance threshold levels when the cumulative impact of approving a CR is within the authority of the CCB. When the cumulative impact of all approved CRs, including the current CR under review, will lead to less than or equal to five percent (5%) variance in previously approved baselines for cost, schedule, and scope, then approval for the current CR under review, may be granted.

8. When the cumulative impact of all approved CRs, including the current CR under review, will lead to more than five percent (5%) variance from previously approved baselines in Cost, Schedule, and Scope, the decision to approve is deferred to Project Sponsor and/or PSC.
9. The CCB may approve a CR but defer its implementation to the M&O period, when the CR is not a priority and not critical for the success of delivering the agreed scope of the RPSD Project.
10. The CCB may also postpone the consideration of CRs to the M&O period.

14.3.3 CR exceptions that do not require CCB review and approval

The CPUC Business PM will make decisions on the following types of CRs, which are exceptions to the CCB review process:

- Documentation CRs
- CRs that do not impact schedule, scope, and cost negatively to cause variance from approved baselines

The Contractor shall review and respond to such CRs within five (5) State business days and may submit to the CCB and/or Project Sponsor/PSC at their discretion if, for instance, the CR contradicts existing system design, best practices, or CPUC policy.

14.3.4 CR Escalations or CRs Deferrals to Project Sponsor/PSC

Escalated CRs will be reviewed by the Project Sponsor or PSC and approved or rejected. Approved CRs will have a specified timeline for implementation.

14.3.5 CRs that require a Special Project Report (SPR) to CDT

When the cumulative impact of all the approved CRs, including the current CR under review, will lead to more than ten percent (10%) variance from previously approved baselines in cost, schedule, and scope, the implementation of the CR is postponed until a time when CDT receives a SPR from the CPUC and grants its approval.

14.3.6 Consolidation of Approved CRs

Approved CRs are consolidated for design and implementation based on priority, severity, and the required timeline. The Business PM will update the Project Management Plan and Subordinate Plans and assign the CRs for implementation.

14.4 Documentation and Management Tools for handling CRs

The Contractor shall use the following documents, templates, and tools, available through the RPSD document repository in handling CRs:

- CR Form
- CR Log
- Decision Log
- CR Impact Assessment (Preliminary)
- CR Impact Assessment (Detailed)
- CCB Meeting Agenda and Minutes
- Steering Committee meeting Agenda and Minutes
- Deliverable Expectation Document (DED)
- Updated Requirements Traceability Matrix (RTM) and other Requirements documents
- Impacted Design Documents
- Contract Amendments
- Updated Project Schedule
- Cost Tracker/Log

14.5 CR Communication Plan

14.5.1 The Contractor's Weekly Project Status Report must have a section to communicate CRs and status.

14.5.2 The CR Log will be available for RPSD Project stakeholders to review.

14.5.3 The CCB and PSC meeting agenda and minutes are sent by the CPUC IT PM to their members.

14.5.4 The CR Form and impact assessment documents will be available to Project team and other stakeholders, upon request.

14.6 Other Management Procedures

14.6.1 PSC meetings are scheduled once a month and the agenda is emailed prior to the meeting. The PSC will be chaired by the Project Sponsor or may be delegated to the Project Director. The PSC will review pending requests including CRs waiting approval, and may approve the CRs per recommendations.

14.6.2 Escalation to the Project Sponsor occurs when CR approval is urgently required.

14.6.3 Issue/Defect Management addresses defects in the deliverables and does not impact CR process. However, an issue may lead to discovery of a gap in the requirements, which can result in a CR.

15. Project (Contractor) Tasks and Deliverable Requirements

This section contains all the deliverables, tasks, and the methodology to be followed when building the RPSD System consisting of the database, web portal, public website, and interfaces/integrations.

15.1 Governing Rules for Project Tasks and Deliverables

This section provides information about the governing rules the Contractor must follow when completing deliverables.

15.1.1 Communication

All email communication related to the deliverables listed in the Table 15-1: Deliverables Table below must be addressed to the CPUC Business PM with a copy to CPUC IT PM. Secure email communication with the relevant attachments, links to resources, and a Deliverable Acceptance Document (DAD) signed by the Contractor PM will serve as submitting the deliverable.

15.1.2 Development and Deployment Approach

The RPSD System development and deployment must be completed in two (2) stages with the first stage delivering the database, web portal, and related interfaces; and the second stage delivering the public website.

15.1.2.1 The database and web portal must be custom developed by building upon a copy of the current RPSD System and expanding to cater to the documented detailed solution requirements.

15.1.2.2 The public website must be modeled after the California Solar Initiative's DGSTATS website located at https://californiadgstats.ca.gov. The Contractor must work with CPUC Energy Division staff in documenting detailed solution requirements and designing the public website prior to the development and deployment of the public website.

15.1.2.3 The Development environment must be setup prior to starting the System detailed designs so the Development environment can be used for any proof-of-concept of the designs or for prototyping.

15.1.2.4 Database detailed designs must be completed prior to starting the development. This will allow the data modeler to think through the data requirements for both the components (web portal and public website) and related interfaces. This approach will reduce the need for changes to the database schema during development.

15.1.2.5 System detailed designs and test plans must be completed prior to starting the development of the web portal or public website.

15.1.2.6 System development through deployment processes are defined in subsection 15.2 System/Software Development Lifecycle (SDLC) tasks below, and are applicable for each system component to be delivered. Deployment completion and its acceptance by the CPUC are prerequisites for approving a related DAD.

15.1.2.7 The Contractor must provide M&O services as defined in 15-1: Deliverable Table and SECTION 31. Maintenance and Operations (M&O).

15.1.3 Deliverables and Payment Milestones

15.1.3.1 The Contractor must deliver the work products identified in Table 15-1: Deliverables Table.

15.1.3.2 Deliverables are grouped, in Table 15-1: Deliverables Table, to form payment milestones for the Contract. For software components (web portal or public website), a payment milestone is reached when the software component is deployed in the RPSD production environment, is error free, and the System is verified and accepted by the CPUC.

15.1.3.3 The Contractor must ensure the web portal and public website deliverables provide the corresponding mapped business capabilities as documented in the "RPSD_map_Business_Capabilities_to_Deliverables.xlsx" file, which is available in the RPSD document repository.

15.1.4 Operations in the RPSD Production Environment

15.1.4.1 Data in the RPSD System Production environment and current RPSD System Production environment must be compared and verified to ensure all the required RPS production data is brought over to the RPSD System.

15.1.4.2 After the web portal deployment in the RPSD Production environment and its acceptance by the CPUC, the RPSD System Production environment must be operational.

15.1.4.3 The current RPSD System operations will be suspended in favor of the RPSD System after retrofitting of current RPSD System changes to the RPSD System.

15.2 System/Software Development Life Cycle (SDLC) Tasks

This section defines a list of tasks that are part of the SDLC process and must be completed to deliver the RPSD System. The Contractor shall provide updated documentation for the following with each SDLC task:

- Requirements documentation (RTM, to-be business process workflows, user interface [UI] mock-up, and associated overview documents)
- Defects/issues log
- Detailed technical designs (from task 15.2.3 perform detailed designs onwards)

- Input data file templates
- CR log and CR details including CR impact assessments

15.2.1 Validate the Detailed Solution Requirements

15.2.1.1 The Contractor must review the current RPSD System environments, functionality, configurations, data dictionary, database, data files organization, and source code.

15.2.1.2 The Contractor must review the RPSD System requirements contained in the detailed solution requirements file, to-be business process flows, UI/screen mockups, input file templates, business overview, and business capabilities mapping to deliverables.

15.2.1.3 The Contractor must hold discussions with the CPUC for any clarifications or elaborations related to RPSD System requirements as specified in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS.

15.2.1.4 The Contractor must prepare a requirements validation report containing a certification that the Contractor has validated the business requirements as specified in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS, list of gaps that were discovered during the requirements validation process, if any, and a list of defects/errors in the requirements.

15.2.2 Environments Setup

The Contractor must create the environments per the requirements below as well as document the setup procedures and configurations.

15.2.2.1 The Contractor must setup a RPSD Development environment based on the proposed architecture and the current RPSD System's Production environment. The Development environment will be required during the detailed technical designs to validate the Contractor's approach for designing the RPSD System.

15.2.2.2 The Testing environment must be setup when the development is complete or one (1) business week prior to the development completion for the web portal. This environment will be shutdown when not in use. The environment will be updated later for conducting System tests for the public website.

15.2.2.3 The Testing environment must be setup for the duration of UAT execution and shutdown when not in use, after taking the backups. The Testing environment must be updated for performing UAT of the public website.

15.2.2.4 The Training environment must be setup for training purposes in the later stages of UAT or after UAT completion and before the System deployment in Production environment. The Training environment must be shutdown, when not in use, after taking the backups. The same Training environment must be updated for reuse when training the users on the public website.

15.2.2.5 The Pre-production environment must be setup after UAT results acceptance and must be available until the successful production deployment and its acceptance by the CPUC has concluded. The Pre-production environment must mimic the Production environment in architecture and size. The Pre-production environment must be activated during the M&O when the Contractor needs to simulate an issue or defect, or to verify subsequent System changes prior to deployment in the Production environment.

15.2.2.6 The Production environment must be setup when the entry criteria for production deployment is satisfied, and the System is ready for production deployment. The Production environment will not be shutdown except when needed for maintenance purposes. The Contractor must document the environment data migration procedures and other deployment procedures.

15.2.3 Perform Detailed Designs

The Contractor must perform detailed technical designs prior to undertaking the development. The Contractor is responsible for each of the following aspects of the RPSD System design:

15.2.3.1 RPS Database Detailed Design

The Contractor must design the data model to extend the current RPSD System as per the requirements specified in the validated EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS. The Contractor must design the database schema with the required primary keys, foreign keys, tables, views, indexes, table/data partitions (if any), and database constraints.

15.2.3.2 Web Portal Detailed Design

The web portal detailed design involves the following tasks:

- Design web portal home page
- Design web portal's web pages to support the required functions (data file upload, validation, error file and export file creation, database update, data submission, data transformation, query, and data downloads)
- Design web portal screen navigation
- Design RPSD access controls & security
- Design interfacing with map APIs/Services to overlay a shapefile or renewable energy generation projects' locations over a chosen base map
- Design RPSD interfaces to support the data visualization, shapefiles' validation, queries about Project locations, or individual project maps
- Design automated virus scans on the uploaded files

15.2.3.3 Batch/Server Processes Design

The batch/server processes design involves the following tasks:

- Design data transformation processes that transform the RPS data submitted by the retail sellers as per the EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS.
- Non-confidential RPS data must be maintained in separate tables as the public website requires only non-confidential RPS data
- Design data transformation processes that promote confidential data to non-confidential data when the required time lapse occurs (Procurement Plan data, Compliance Report data, shapefile data, and RPS offer data)
- Design automation scripts for data refresh of Tableau interactive workbooks, and to upload Tableau interactive workbooks to Tableau Public
- Design a batch process for transaction reconciliation among retail sellers
- Design a batch process for generating a transaction reconciliation report

15.2.3.4 Public Website Detailed Design

The public website detailed design involves the following tasks:

- Design public website home page

- Work with CPUC Energy Division staff in designing and developing interactive Tableau workbooks for data reporting and visualization
- Design web pages for embedding Tableau interactive workbooks
- Design web pages for supporting data query and download functionality that is outside the Tableau interactive workbooks
- Review the designs and ensure that only non-confidential RPS data is available to public website users

15.2.3.5 CPUC Energy Division Staff Interface to RPS Database

The CPUC Energy Division staff interface (to RPS database) creation involves the following tasks:

- The Contractor must define a database role that only provides access to non-confidential RPS data and assign it to CPUC Energy Division staff who create interactive Tableau workbooks for the public website
- The Contractor must define a database role that provides access to all the RPS data and assign it to CPUC Energy Division staff who perform data reviews, data analysis, and internal data reporting
- CPUC will install a Tableau client software on the user's desktop/laptop
- Configure AWS to whitelist the user's static Internet Protocol (IP) address for inbound traffic
- CPUC will configure the CPUC firewall to allow the user to connect to external data sources
- The Contractor must configure Tableau client to connect to the database by providing the database URL, connection port (default: 5432)
- The Contractor must test the connection
- The Contractor must provide two different database logins, if a CPUC Energy Division staff requires both restricted access to non-confidential datasets for creating Tableau workbooks for public website, and unrestricted access for RPS data analysis and reporting

15.2.3.6 CPUC Energy Division Data Warehouse Interface to RPS Database

The Contractor must define a database role that provides access to the required data sets and assign it to the python based data extract program (will use a specific user login to access RPS data) that is used by the CPUC Energy Division Data Warehouse team.

15.2.3.7 RPS Admin/Django Admin Functionality

The Contractor must enhance the current Django Admin module within the RPSD System to provide admin functionality that includes metadata changes, improved user activation/de-activation process, and setting up outage alerts related to System M&O.

15.2.4 Develop the RPSD System

15.2.4.1 The Contractor must develop the RPS database schema and create the RPS database per the schema.

15.2.4.2 Develop the Web Portal

Developing the web portal involves the following tasks:

- Extend a copy of the current RPSD System to accommodate new user categories (SMJUs, CCAs, and ESPs) under the Retail Seller umbrella category
- Develop web portal functionality to identify transactions (Power Purchase Agreements [PPAs], and Power Sales Agreements [PSAs]) between Retail Sellers in order to match and reconcile transactional data across multiple user submissions by CPUC Energy Division staff
- Develop web portal functionality to accommodate data file upload, validation, data submission, confidentiality report, and attestation of RPS Procurement Plans
- Develop web portal functionality to accommodate data file upload, validation, data submission, confidentiality report, and attestation of RPS Compliance Report
- Develop web portal functionality to accommodate data file upload, data visualization, data validation, and data file submission of RPS shapefiles
- Develop web portal functionality to associate and de-associate RPS Projects with the RPS shapefiles
- Extend the RPSAdmin functionality for activating/deactivating users

- Extend the RPSAdmin functionality for updating metadata
- Develop RPSAdmin functionality for updating website static content, when needed
- Develop web portal functionality to query and download historical data submitted by the respective retail sellers
- Develop web portal functionality to query and download historical data by CPUC Energy Division staff without restrictions
- Develop mapping capability of RPS project sites on a chosen base map with the required query filters, data security, and confidentiality based on user category
- Develop the web portal home page, navigations, and integration with the other functionalities
- Develop an updated online data dictionary
- Refer to validated detailed solution requirements, detailed designs, and business capability mapping to deliverables located in the RPSD document repository for further information

15.2.4.3 Develop the Public Website

Developing the public website involves the following tasks:

- Develop interactive Tableau workbooks to be used in the public website
- Develop the public website per the documented requirements, business capabilities, and detailed designs
- Develop integrations (URL redirection from CPUC website's RPS page [https://www.cpuc.ca.gov/rps] to public website, Tableau Public integration with web pages and server side scripts, maps integration, and potential integration with high charts)
- Develop any data transformations needed to support the public website using batch processes

15.2.5 Perform Testing

15.2.5.1 The Contractor must be responsible for creating test scripts, unit testing, document test results, and provide defect fixes.

15.2.5.2 The Contractor must complete System and interface tests, document test results, and providing defect fixes.

15.2.5.3 UAT Support

The Contractor must be responsible for the following activities related to UAT Support:

- Create the Testing environment
- Stand-by for UAT support (to answer questions and to address any UAT data issues or UAT environment stability issues)
- Review defects log to review defects discovered in UAT
- Provide resolutions (acknowledge defect and identify a solution, or provide explanation that the documented defect is not a defect and is as per the requirements and/or designs)
- Develop and unit test defect fixes
- Review CRs, analyze, and provide impact assessments
- Implement approved and prioritized CRs
- Regression test defect fixes and CRs in the System testing environment
- Deploy updated schema, code, and configurations in the UAT environment
- Refresh data in the Testing environment for iterative testing

15.2.6 Training

The Contractor must provide the following as part of the SDLC process for CPUC review and approval prior to completion of deliverables eleven (11) and twelve (12) in the Table 15-1 Deliverables Table:

15.2.6.1 Certification by the Contractor that the training is complete for the required deliverable (web portal or public website)

15.2.6.2 Updated Training environment, backup, and instructions for setting up the environment including build scripts and procedures

15.2.6.3 Training material which includes presentations, user guides/manuals, reference guides, labs/exercises that reflect real life use cases, and answer key to the labs/exercises

15.2.6.4 Recorded training session for future use by CPUC to train new stakeholders

15.2.6.5 Updated training materials, incorporating feedback from users

15.2.6.6 Updated user guide(s)

15.2.6.7 Updated operations manual

15.2.6.8 All training related questions must be documented and answered prior to closeout and acceptance of the training work to be provided by the Contractor.

15.2.7 Pre-Production Deployment and Verification

15.2.7.1 The Pre-production environment will mimic the Production environment in size and
configuration. The following additional tests are performed in the Pre-production environment:

- Performance testing
- Stress testing/load testing for the expected load on the System
- Regression testing to ensure changes to the System do not compromise previously delivered functionality
- Security testing - The Contractor will be responsible for any action items that arise from vulnerability scans and penetration testing which are performed prior to going live with the web portal or public website.

15.2.7.2 The Contractor must provide the following as part of the SDLC process for CPUC review:

- Certification by the Contractor that the Pre-production deployment and verification is complete for the deployed RPSD deliverable (web portal or public website)
- Update Pre-production environment, backup, and instructions for setting up the environment including build scripts and procedures
- Update data migration plan, test results, and comparison of data with the current RPSD System when delivering the web portal
- Security testing results and action log
- Pre-production System verification checklist/plan and results
- Updated version-controlled source code
- Updated System technical/network architecture diagram
- Performance testing results

15.2.8 Production Deployment and Verification

The Contractor must provide the following as part of the SDLC process for CPUC review and acceptance:

- A working and operational RPSD System in a Production environment with all the required production data from the current RPSD System (RPS data migration check and comparison to the current RPSD System is only required for the web portal deployment)
- RPSD System source code that matches the RPSD System production environment
- Updated system documentation (RTM, design documents, test plans, test results, issue log, CR log, decision log, user guides, training material, deployment and verification procedures, and operations manual)

15.3 Deliverables Table

The Deliverables Table identifies the work products that RPSD System implementation Contractor must deliver to fulfill the SOW. All work products developed under the RPSD Project Contract will be fully and solely owned by the CPUC. Each deliverable will have SDLC work products as defined in sub-section 15.2 System/Software Development Lifecycle (SDLC) Tasks. When submitting a payment milestone deliverable, include references to all the associated SDLC work products. Bidders may propose an alternate timeframe for deliverables outlines below.

Table 15-1: Deliverables Table

Deliverable Number	Deliverable Name	Description	Expected Timeframe
1	Contractor Work Plan, and RPSD Project Schedule	1.1 The Contractor must provide a Project schedule for accomplishing the RPSD Project deliverables. The Project schedule must contain the following for each deliverable: 1.1.1 Tasks, tasks sequence, timeline, and resources to be assigned 1.1.2 Resource role (designer, reviewer, developer, tester, architect, manager) in performing the task 1.1.3 Schedule must assign a Resource Calendar for each resource/team member, so planned time off can be individually shown 1.2 The Contractor must provide a Work Plan that spells out the following for each deliverable: 1.2.1 Methodology for achieving the deliverable completion 1.2.2 Issue management approach containing issue identification, reporting, resolution, and escalation process 1.2.3 Schedule and variance monitoring, reporting, and control	Within the first thirty (30) business days from the Contract execution

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		1.2.4 Onboarding plan for each resource and task combination 1.2.5 Exit criteria - tasks for review and validation of work product and exit conditions	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
2	Validated RPSD Detailed Solution Requirements and Business Process Flows	2.1 The Contractor must provide a Requirements Review and Validation Report that contains: 2.1.1 Confirmation that the Contractor understands the functional, non-functional, project transition requirements, business capabilities, business rules, and business process workflows in detail that correspond to the RPSD System, and interfaces 2.1.2 Confirmation that the Contractor has reviewed the current RPSD System and must be able to build the RPSD System on top of a copy of the current RPS database, datafiles, code base, and configurations 2.1.3 Issue Log that contains a list of issues discovered within the requirements documentation (RTM, to-be Business Process Workflows, Business Overview documents, and User Interface, Screen, or Webpage mockups) 2.1.4 Updated CR log that includes all the CRs identified during the RPSD detailed solution requirements and business process flows validation.	Within the first forty (40) business days from the Contract execution

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		2.2 The Contractor must document public website detailed solution requirements, screen mockups, use cases, process flow charts, queries, report/output content, and report/output formats to be gathered via Joint Application Design/Development (JAD) sessions with CPUC Energy Division staff.	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
3	RPSD Development Environment Setup and Documentation	3.1 The Contractor must deliver a working RPSD Development environment based on a copy of the current RPSD Production environment and code base. This environment must contain the database schema and sample data (in the database and file system) for functionality review. 3.2 The Contractor must provide an RPSD Development environment setup document containing step by step procedures used to create the RPSD Development environment and links to resources such as database schema, code base, and configuration items. 3.3 The Contractor must provide a document containing RPSD development procedures that all developers must follow in using the development environment and code base, including coding standards, reviews, developer responsibilities, source code branching, check-out, check-in, and build procedures.	Within the first forty (40) business days from the Contract execution

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		3.4 The Contractor must provide a backup of development environment to use as a starting point if the RPSD development environment needs to be restored to its initial state.	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
4	RPS Database Detailed Design	The Contractor must design the data model, and the database in consultation with CPUC Energy Division staff and incorporate changes into the designs based on CPUC feedback. 4.1 RPS database detailed design components must include: 4.1.1 Logical Design: tables, views, indexes, constraints, triggers, stored procedures, and organization including data partitioning, if any; 4.1.2 Physical Design: configuration and storage specifications for PostgreSQL database/RDS with PostGIS extension. 4.2 Data model and database design must use the following design principles:	Within twenty five (25) business days after the completion of deliverable two (2)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		4.2.1 The database design must ensure that confidential data will reside in separate tables from non-confidential data tables, for better access control to confidential data. 4.2.2 The database design must be flexible to accommodate all the data and security requirements for all the RPSD System components including interfaces and batch processes. 4.2.3 The database design must consider the data from the current RPSD System that must migrate to the RPS database. 4.3 The Contractor must deliver a database design document that contains the following sections: 4.3.1 Entity Relationship Diagram (ERD) for the entire to-be RPS data model 4.3.2 A data dictionary containing all data elements and attributes to be used to define the online RPSD data dictionary	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		4.3.3 A database schema file with all RPS database object definitions (database tables, views, and indexes) in the required PostgreSQL/PostGIS Data Definition Language (DDL) or Django model definitions used for data migration 4.3.4 A description of data security attributes 4.3.5 Specifications for all automated events and database triggers 4.3.6 Database, table, and column encryption designs or specifications 4.3.7 Specifications for various database access roles and access permissions 4.3.8 List of performance indexes and table partitions where needed 4.3.9 List of constraints defined at database or table level	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
5	Web Portal Detailed Technical Designs	The Contractor must deliver a web portal technical design document spanning the following design components and functionality components for implementing the web portal per the detailed solution requirements. The Contractor must invite CPUC Energy Division staff and the Contractor Testing/ QA Lead to participate in design reviews, obtain their feedback, and incorporate any resulting changes into the designs. 5.1 Web portal design components must include: 5.1.1 UI/Web page layouts, UI events, screen navigation, inputs, outputs, user interactions (includes request for new account, password management, user authentication, data file uploads, downloads, data file submission, and attestation), data validations to be performed by the System, workflow, query framework, data visualization framework (for charts, graphs, and maps), and data download framework 5.1.2 Asynchronous processes, database, and Interfaces, and other interfaces (email, virus scan, map services, and Tableau public interface)	Within ten (10) business days after the completion of deliverable four (4)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		5.1.3 Updated architecture diagram 5.1.4 Updated detailed solution requirements document (or RTM) 5.1.5 Updated RPS data model and schema design. 5.2 Functionalities must include: 5.2.1 User login and authentication (per the requirements) 5.2.2 User access permissions - role based functionality 5.2.3 Data file uploads 5.2.4 Virus scan of file uploads or attachments 5.2.5 Data file parsing, validations, and error reports 5.2.6 Database update and data file storage 5.2.7 Data export and data downloads 5.2.8 Queries 5.2.9 Data visualizations and Tableau workbook integration	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		5.2.10 Notifications/alerts 5.2.11 Online data dictionary - content, organization of content, and screen navigation 5.2.12 Online hosting of templates, instructions, and static web pages 5.2.13 Privacy notice and link on the web portal home page 5.2.14 System outage alert webpage 5.2.15 Admin functionality for metadata changes 5.2.16 Admin functionality for user activation/deactivation	
6	Web Portal Unit Test Plans	The Contractor must deliver a unit test plan document containing unit test plans for individual functions within the web portal. The unit tests must cover all functionalities contained in the web portal or required by the web portal to function correctly. They include unit test plans for all web pages, interfaces/ integrations, and asynchronous/batch processes. The unit test plans must also describe review and acceptance criteria.	Within one (1) business day after the completion of deliverable five (5)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
7	Web Portal System Test Plans	The Contractor must deliver a System and integration test plan using the CDT master test plan template located at https://projectresources.cdt.ca.gov/sdlc, which is also available in the RPSD document repository. 7.1 The web portal System test plan must include: 7.1.1 Normal business process workflows 7.1.2 Alternative or exceptional business process workflows 7.1.3 Test Items and test cases within each test item 7.1.4 Entry and exit criteria for each test case 7.1.5 Pass/fail criteria for each test item 7.1.6 Test bed and baseline test data requirements for each test item and test case 7.1.7 Inputs and expected intermediate and end-results for each test case	Within ten (10) business days after the completion of deliverable six (6)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
8	Public Website Detailed Technical Designs	The Contractor must deliver a public website technical design document spanning the following design components and functionality components for implementing the public website per the detailed solution requirements documented by the Contractor as per deliverable 2.2. The Contractor must invite CPUC Energy Division staff for public website design sessions to get early feedback. The CPUC Energy division staff will provide interactive Tableau workbook designs and workbooks that the Contractor must embed into the public website's web pages. 8.1 Public website design components must include: 8.1.1 UI/webpage layouts, UI events, screen navigation, user interactions, queries, data visualization, data downloads, and interactive Tableau workbooks 8.1.2 Interfaces with Tableau Public, map services, and the CPUC main website https://www.cpuc.ca.gov (which will have a URL redirection/link to the public website)	Within fifteen (15) business days after the completion of deliverable five (5)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		8.1.3 Updated architecture diagram 8.1.4 Updated detailed solution requirements document (or RTM) 8.1.5 Updated RPS data model and schema design 8.2 Functionalities must include: 8.2.1 Interactive access of non-confidential RPS data for public/ anonymous users over the public website 8.2.2 A set of menu driven query functions 8.2.3 Ability for users to download the query results or datasets 8.2.4 Webpages that embed predesigned interactive Tableau workbooks that encapsulate a snapshot (point in time data, not real time data) of non-confidential RPS data (these Tableau workbooks will be refreshed once a month or on ad-hoc basis to reflect RPS data changes.) 8.2.5 Online help/instructions for public website navigation	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		8.2.6 Confidentiality/privacy notice 8.2.7 Online data dictionary (for the non-confidential RPS data) 8.2.8 Outage alert when the site is down	
9	Public Website Unit Test Plans	The Contractor must deliver a unit test plan document containing unit test plans for individual functions within the public website. The unit tests must cover all functionalities contained in the public website or required by the public website to function correctly. They include unit test plans for all web pages, interfaces/ integrations, and asynchronous/batch processes. The unit test plans must also describe review and acceptance criteria.	Within one (1) business day after the completion of deliverable eight (8)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
10	Public Website System Test Plans	The Contractor must deliver a system and integration test plan using the CDT Master Test Plan template located at https://projectresources.cdt.ca.gov/sdlc, which is also available in the RPSD document repository. 10.1 The public website System test plan must include: 10.1.1 Test items and test cases within each test item 10.1.2 Entry and exit criteria for each test case 10.1.3 Pass/fail criteria for each test item 10.1.4 Test bed and baseline test data requirements for each test item and test case 10.1.5 Inputs and expected intermediate and end-results for each test case	Within ten (10) business days after the completion of deliverable nine (9)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
11	Web Portal	Deliver the web portal using the SDLC methodology defined in sub-section 15.2 System/Software Development Lifecycle (SDLC) Tasks. The web portal deliverable completion requires successful development, unit testing, System and interfaces testing, UAT, deployment and verification in Pre-production environment, deployment in the RPSD Production environment, and review and acceptance by the CPUC. Web portal deliverable must contain the following components: 11.1 Updated documentation - detailed solution requirements (RTM), business process flows, detailed database designs, detailed UI and interface designs, test plans, data migration plans, specifications for server scripts, specifications for test scripts, test results, stakeholder training, user guide, quick start guide, architecture diagram, configuration details, development procedures, deployment procedures including setup instructions for the required interfaces, defects log, change requests log, and lessons learned document	Within one hundred ten (110) business days after the completion of deliverable five (5)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		11.1.1 Training materials and delivery for stakeholders are further defined in SECTION 30. Knowledge Transfer and/ or Training. 11.2 Updated system environments with the final and accepted web portal: Development, Testing, Training, Pre-production, and Production environments 11.3 Production System (includes the web portal, database, data files, and interfaces/integrations) backups and source code repository backups (electronic links communicated over email to CPUC Business PM are acceptable)	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
12	Public Website	Deliver the public website using the SDLC methodology defined in sub-section 15.2 System/Software Development Lifecycle (SDLC) Tasks. This deliverable completion requires successful deployment of the newly developed and tested public website in the RPSD Production environment, and its acceptance by the CPUC. The public website must contain the following components: 12.1 Updated documentation - detailed solution requirements (RTM), business process flows, detailed database designs, detailed UI and interface designs, tableau workbook designs, specifications related to automation scripts for Tableau workbook data refresh and uploading to Tableau public, test plans, specifications for test scripts, test results, user training material, user guide, quick start guide, architecture diagram, development procedures, deployment procedures including setup instructions for interfaces/integrations, defects log, change requests log, and lessons learned document.	Within one hundred ten (110) business days after the completion of deliverable eleven (11)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		12.2 Updated System environments containing the final and accepted public website: Development, Testing, Training, Pre-production and Production environments 12.3 Production System (includes the public website, database, data files, and interfaces/integrations) backups and source code repository backups (electronic links communicated over email to CPUC Business PM are acceptable)	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
13	System Transition and Knowledge Transfer Documentation	The Contractor must complete the following components: 13.1 System Administration This knowledge is intended to provide a future M&O Contractor the ability to perform/verify day-to-day operations, System Administration of the RPSD System Production environment, and maintenance of all RPSD System non-production environments (Development, Testing, Training, and Pre-production environments). 13.1.1 The Contractor must deliver training and knowledge transfer documentation in operational tasks and system administration including environment setup, change control procedures, deployment and verification procedures, Incident response procedures, performance testing, capacity planning, annual Information System Recovery Plan (ISRP) testing, and disaster recovery. 13.1.2 The Contractor must deliver a recorded video tutorial of the training and knowledge transfer to CPUC.	Within fifteen (15) business days after the completion of deliverable twelve (12)

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		13.1.3 The Contractor must provide an operations manual for the RPSD System Production environment per section 30.7 RPS Administrator Manual. 13.2 Business Functionalities This knowledge is intended to provide a future M&O Contractor the ability to support business users, to diagnose discovered or reported issues, perform CR impact assessment, and implement CRs. The training material prepared for User training may be reused to fulfill a portion of this deliverable. 13.2.1 The Contractor must deliver training and knowledge transfer documentation that will familiarize a future M&O Contractor with the RPSD System overview, user roles and functions, system integrations, test plans, and test results. 13.2.2 The Contractor must provide training material (presentation, user guides/manuals, reference guides, exercises/labs to reflect real life use cases, and answer key to the labs/ exercises) and knowledge transfer presentation documents.	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		13.2.3 The Contractor must deliver a recorded video tutorial of the training and knowledge transfer to the CPUC. 13.3 Technical Artifacts This knowledge is intended to provide a future M&O Contractor the ability to provide M&O services that include defect fixes, System enhancements, platform upgrades besides capacity planning, and implementing action items resulting from security testing. 13.3.1 The Contractor must deliver training and knowledge transfer documentation that will familiarize a future M&O Contractor with the entire RPSD code base, data model, development procedures, technical architecture, core functions and libraries, interfaces, debugging procedures, defect fixes, CR implementation, testing procedures, deployment, and verification procedures.	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		13.3.2 The Contractor must provide training material (presentation, user guides/manuals, reference guides, exercises/labs to reflect real life use cases, and answer key to the labs/ exercises) and knowledge transfer presentation documents. 13.3.3 The Contractor must deliver a video recording of the knowledge transfer and training sessions for future use by the CPUC. 13.3.4 The Contractor must provide responses to CPUC comments, and update the documents to reflect CPUC recommended changes.	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
14	RPSD Warranty	14.1 The Contractor must provide warranty for the initial Production deployment (RPS database, web portal, and interfaces) and its acceptance by the CPUC until the full System, including the public website, is deployed and accepted by the CPUC. 14.2 The Contractor must also provide an additional one (1) year warranty for the full RPSD System deployment commencing from the CPUC acceptance of the full and final deployment. 14.3 The Contractor must provide warranty for their designs, custom software/code, its impact on legacy RPSD code, test plans, deployment procedures, production deployment, and documentation. 14.4 The Contractor must provide remedies and defect fixes free of cost to the CPUC within the time frames defined in the Service Level Agreements (SLAs), defined in SECTION 35. Service Level Agreements (SLAs), when defects are identified in any of the items under warranty.	Starts upon acceptance of the web portal deliverable eleven (11) by the CPUC and ends after one (1) year of full system acceptance (deliverable twelve [12] included) by the CPUC

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		14.5 The Contractor must warranty the legacy RPSD code only if the RPSD code introduced by the Contractor negatively impacts the System. 14.6 The Contractor must introduce changes to address warranty related issues and deploy incremental service releases to the RPSD System in the Production environment.	

Deliverable Number	Deliverable Name	Description	Expected Timeframe
15	RPSD System M&O	15.1 M&O Support/Services Timeline 15.1.1 The Contractor must provide M&O Support/Services for the RPSD System from the initial deployment (deliverable eleven [11]) until the full system is deployed (deliverable twelve [12]). 15.1.2 The Contractor must provide one (1) year of M&O Support/Services starting from the full deployment (public website included) and acceptance by the CPUC. 15.2 The Contractor must provide support for the RPSD System operations including backups, continuous operations, monitoring, routine maintenance related to stability, security, and performance. 15.3 The Contractor must provide impact assessments and effort estimates for CRs that fall under the minor CR category. The Contractor will implement approved CRs and release the implemented CRs to Production in approved bundles.	Starts upon acceptance of the web portal deliverable eleven (11) by the CPUC and ends after one (1) year of full System acceptance (deliverable twelve [12] included) by the CPUC

Deliverable Number	Deliverable Name	Description	Expected Timeframe
		15.4 The Contractor must deliver incremental (or minor) service releases to fix defects including fixes related to warranty. The scope includes analysis, planning, design, data model changes, code changes, testing, verification, documentation, and deployment. 15.6 The Contractor must respond to RPSD System incidents, per the SLA requirements defined in SECTION 35. Service Level Agreements (SLAs). 15.7 The Contractor must participate in IT security testing after each incremental (minor or major) release, and participate in annual information system recovery testing per the ISRP which will be made available to the Contractor during the course of the Project. 15.8 The Contractor must update RPSD technical and user documentation to align with implemented changes and defect fixes.	

16. Deliverable Acceptance/Rejection Process

It shall be in the State's sole determination as to whether a project task/deliverable has been successfully completed and acceptable to the State.

16.1 Acceptance Criteria

16.1.1 Deliverables for this project are defined in Table 15-1: Deliverables Table in SECTION 15. Project (Contractor) Tasks and Deliverable Requirements. Each deliverable shall be reviewed and accepted by the CPUC Business PM.

16.1.2 Payment is based on the deliverables and cost as stated in ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK and EXHIBIT C: COST WORKSHEETS. See SECTION 37. Budget Detail and Payment Provisions for payment and invoicing terms.

16.1.3 Contractor shall provide deliverables and complete milestones as set forth in the ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK by no later than the date or dates set for delivery in the Project Schedule.

16.2 DED

16.2.1 The DED, EXHIBIT D: DELIVERABLE EXPECTATION DOCUMENT (DED) presents an outline with explanations of the tasks associated with each deliverable, an estimated time schedule, and all the information requested to be provided in order to establish a mutual understanding between the CPUC and the Contractor.

16.2.2 All DED's must be approved prior to beginning work and signed by the Contractor and the PM. Below are the steps in developing the DED:

1. The Business PM will contact the Contractor to determine the tasks required for the DED.
2. The Business PM will populate the DED and send to the Contractor for sign off.
3. The Business PM returns the fully signed copy of the DED to the CPUC IT Contract Administrator.

16.2.3 There may be multiple DEDs. For each deliverable, a DED must first be delivered for approval and fully executed before work can commence.

16.2.4 The CPUC has the right to require the Contractor to stop or suspend work on any DED pursuant to the "Stop Work" provision of the General Provisions.

16.3 Deliverable Acceptance Document (DAD)

16.3.1 The Contractor shall provide a Deliverable Acceptance Document (DAD), EXHIBIT E: DELIVERABLE ACCEPTANCE DOCUMENT (DAD) to the CPUC Business PM, upon delivery of a completed Deliverable to CPUC, prior to invoice submission. For all deliverables, a review period of no more than ten (10) business days shall be provided to CPUC to log deficiencies. The CPUC shall determine whether the deliverable meets the acceptance criteria. Acceptance Criteria includes all requirements for a deliverable and associated services described in ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK, EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS, and the performance warranties in SECTION 35. Service Level Agreements (SLAs). With respect to any deliverables that are susceptible to Acceptance Testing, CPUC shall conduct Acceptance Testing as set forth in SECTION 28. System Testing and Acceptance Procedures. If the CPUC determines the deliverable meets the Acceptance Criteria, the CPUC shall sign the DAD and email it to the Contractor. The approved DAD must be included with invoice submission.

16.3.2 Each deliverable will have its own review and acceptance criteria based on the nature of the deliverable. The CPUC will determine whether the deliverable meets the acceptance criteria set forth in the Contract.

16.3.3 If the CPUC determines that a deliverable does not meet the acceptance criteria in all material respects, the CPUC will notify the Contractor in writing of the CPUC's rejection of the deliverable. The notification will describe the basis for the CPUC's rejection.

16.3.4 The Contractor shall provide a DAD upon delivery of each completed deliverable to the CPUC. The CPUC will accept or reject the DAD within fifteen (15) business days after receipt.

16.3.5 Re-submission Process for rejected deliverables

16.3.5.1 Upon receipt of notice of deliverable rejection, the Contractor shall, within fifteen (15) business days and at no additional expense to the CPUC, modify or improve the deliverable in order to address the CPUC's rejection and to meet the acceptance criteria. The Contractor shall resubmit the deliverable to the CPUC.

16.3.5.2 The CPUC will then review the modified or improved deliverable within fifteen (15) business days of receipt. Failure of the modified or improved deliverable to meet the acceptance criteria in all material respects, following a previous deliverable rejection, shall constitute a default by the Contractor. The CPUC may either notify the Contractor of the default or instruct the Contractor to modify or improve the deliverables as defined in this section.

16.3.5.3 The costs related to rework of unacceptable work products shall not be billed to the CPUC.

16.3.5.4 If the CPUC determines that the deliverable meets acceptance criteria, CPUC shall notify the Contractor of the CPUC’s acceptance in writing, by signing the DAD.

16.4 System Component Acceptance

16.4.1 When the system acceptance is complete for the RPSD production deployment, the CPUC will provide approval, in the form of a signed DAD, via email to the Contractor PM. This approval will come in two stages. The first stage will cover the RPS database, web portal, and interfaces (deliverable eleven [11]). The second stage will cover the public website (deliverable twelve [12]).

16.4.2 The deliverable acceptance is contingent upon the following verifications:

16.4.2.1 All the requirements contained in the SOW and RTM, as well as approved CRs for deliverables 1-12, have been implemented and are in production.

16.4.2.2 Web Portal verifications:

- IOUs including SMJUs have used the web portal to successfully upload, validate, and submit all the data files that are due within one month of the RPSD System deployment in the Production environment (any or all files among Monthly Report, Semi-annual Report, Offer file, RPS Compliance Report and

Procurement Plans), submit associated confidentiality report and attest the data file submission

- IOU data submission, for files that are not due within one month of the RPSD System deployment in Production environment, have been tested with simulated dates and CPUC staff submitting data files as proxy for IOU users in Pre-production environment or in a Test environment that is of the same size as the Pre-production environment
- CCAs and ESPs have successfully used the web portal to successfully upload and submit all the data files that are due within one month of the RPSD System deployment in the Production environment (any or all files among Monthly Report, Semi-annual Report, Offer file, RPS Compliance Report, and Procurement Plans), submit associated confidentiality report, and attest the data file submission
- CCA and ESP data submission, for files that are not due within one month of the RPSD System deployment in Production environment, have been tested with simulated dates and CPUC staff submitting data files as proxy for CCA/ESP users in Pre-production environment or in a Test environment that is of the same size as the Pre-production environment
- Retail Sellers (IOUs including SMJUs, CCAs, and ESPs) have successfully uploaded shapefiles, validated them using data visualization, and linked them to RPS Projects and Offers
- Confidentiality of RPS data is maintained across retail sellers so one retail seller's confidential data is not accessible by another retail seller
- CPUC Energy Division staff have access to all the required RPS data to perform their job duties
- RPS Admins (CPUC RPS administrator and the Contractor) have access to administrator functionality to modify configuration data, upload Template files, modify/update on-line data dictionary, and upload user guides when needed, as per the documented detailed solution requirements
- The Contractor M&O team can perform their operational duties per the operations manual and no issues have been discovered in the operation of the RPSD System
- All backups are valid and can be restored in an alternate environment

16.4.2.3 Public Website verifications:

- Public users have access to public website and the non-confidential RPS data that is hosted by the public website
- Public users do not have access to confidential RPS data
- CPUC Energy Division staff have access to the public website and the non-confidential RPS data that is hosted by the public website
- Retail Sellers (IOUs including SMJUs, CCAs, and ESPs) have access to the public website and the non-confidential RPS data that is hosted by the public website
- All the functionalities that are required to be provided by the public website are available and the public website has no critical and no major errors

16.5 Final Acceptance Leading to Project Closure

16.5.1 Final acceptance of the completed RPSD System shall occur when the following events have occurred, or conditions exist:

16.5.1.1 The CPUC has notified the Contractor that the implemented system meets all acceptance criteria and all acceptance tests have been successfully completed, as specified in the SECTION 28. System Testing and Acceptance Procedures

16.5.1.2 The Deployment testing and verification is complete without any adverse findings and the CPUC ISO coordinated vulnerability test and AWS penetration testing did not result in adverse findings or all action items resulting from the vulnerability and penetration tests have been addressed by the Contractor and approved by the CPUC ISO

16.5.1.3 The RPSD System is stable, complete, and operating correctly as specified in ATTACHMENT 1: APPENDIX A - STATEMENT OF WORK, without critical, major, and minor defects for a minimum of thirty (30) days in Production environment

16.5.1.4 The CPUC has notified the Contractor that the State of California's and CPUC's authorizations to accept the implementation of the RPSD System have been received

16.5.1.5 The Contractor has delivered all documentation in accordance with the terms of the Contract

16.5.1.6 The Contractor has completed, and the CPUC has accepted, deliverables for the End User Training, Administrative Training, and Knowledge Transfer Documentation as specified in SECTION 15. Project (Contractor) Tasks and Deliverable Requirements

17. Data Handling and Ownership

17.1 Data Handling Responsibilities

17.1.1 Data Migration

The Contractor is responsible for data cleansing and migration from the current RPSD System to the RPSD System. The CPUC will decide on a cutover date for data migration and obtain a copy of the current RPSD data. Then the Contractor must migrate the data (both data files and database data) to the RPSD System.

17.1.2 Initial Data Setup

The Contractor is responsible for migrating legacy geospatial shapefiles to the RPSD System. This is part of the initial data setup for the RPSD System.

17.1.3 Data Model Design

The Contractor is responsible for designing/extending the RPS data model to accommodate new reporting and data processing requirements.

The new data model will accommodate the following:

- Data in the current RPSD System
- Shapefile data and their association to Projects/Offers
- Compliance Reporting data which has multiple data files and multiple worksheets within each data file include the following files:
    - RPS Compliance Report_IOU_ESP_CCA.xlsx (Currently two (2) additional variations of this template are used: one (1) by Pacific Corporation, and the second (2nd) by both Bear Valley Electric Service (BVES) and Liberty/Calpeco. In future, these three (3) templates may be merged into one (1) so all the reporting entities will use a common template for Compliance Report.)

- RPS Hourly eTag Summary Report.xlsx
- RPS Hourly Meter and e-Tag Reconciliation Report.xlsx

Currently, the Compliance Report has eleven (11) worksheets. One (1) worksheet is for instructions, four (4) worksheets have derived information, and six (6) worksheets have primary inputs. The report is revised annually to reflect the current year and Compliance Period, as well as rule changes, or for improvements in clarity or function. As such, although the overall workbook structure remains static, the number of worksheets and their contents may vary, in which case, Energy Division will provide the new templates for the Compliance Report. The worksheets containing derived information do not need to be validated. Data will be stored as-is for the derived worksheets. The worksheets that contain primary data must be validated by the System before updating the database. The data model must accommodate all the data (both primary and derived), confidentiality tagging, and any data transformations required for data analysis. The data model must have predefined views that cater to the data analysis requirements.

- Procurement Plan Data has three (3) data files which include:
  - Cost Quantification (refer to Cost Quantification Template 2022)
  - Renewable Net Short (refer to Renewable Net Short Template 2022)
  - Project Development Status Report (refer to Project Dev. Status Template 2022)

  The Cost Quantification file has two (2) worksheets and multiple tables to report actual data and forecast data.

- Data transformation and data interface tables as required for queries and reports:
  - When data needs to be transformed into alternate data structures for better query and reporting or for creating cumulations or aggregations
  - When data needs to be separated into confidential data and non-confidential data for better access controls and for supporting de-classification of confidential data based on time lapse

17.2 System Usage Statistics

The table below provides current and project usage metrics.

Table 17-1 System Usage Statistics

Data File	Quantity/ Frequency Per Year	Number of Organizations - Proposed System	Number of Organizations - Current system	Remarks
Monthly Report	12	75	3	N/A
Semi-Annual Report	2	75	3	Historically, this was called Annual Report which is now changed to Semi-annual Report as this data file is now required and submitted twice a year
Offer File/Report	Ad-Hoc (1 to 4)	75	3	Quantity/ Frequency per year is an estimate. This quantity may vary year to year.

Data File	Quantity/ Frequency Per Year	Number of Organizations - Proposed System	Number of Organizations - Current system	Remarks
RPS Procurement Plan - Cost Quantification	2	75	N/A	Currently the three (3) large IOUs submit their RPS Plans over Secure File Transfer Protocol (FTP) and not via web portal. The IOUs submit a draft RPS Plan initially and within six (6) months they submit a final RPS Plan.
RPS Procurement Plan - Renewable Net Short (RNS)	2	75	N/A	Currently the three (3) large IOUs submit their RPS Plans over Secure FTP and not via web portal. The IOUs submit a draft RPS Plan initially and within six (6) months they submit a final RPS Plan.

Data File	Quantity/ Frequency Per Year	Number of Organizations - Proposed System	Number of Organizations - Current system	Remarks
RPS Procurement Plan - Project Development Status Report	2	75	N/A	Currently the three (3) large IOUs submit their RPS Plans over Secure FTP and not via web portal. The IOUs submit a draft RPS Plan initially and within six (6) months they submit a final RPS Plan.
Compliance Report - IOU_ESP_CCAs	1	Up to 75	Handled outside the System	Preliminary Report is filed by August 1st each year
Compliance Report - PacifiCorp	1	1	Handled outside the System	Preliminary Report is filed by August 1st each year

Data File	Quantity/ Frequency Per Year	Number of Organizations - Proposed System	Number of Organizations - Current system	Remarks
Compliance Report - BVES_Liberty_Calpeco	1	2	Handled outside the System	Preliminary Report is filed by August 1st each year. BVES files separately from Liberty/ Calpeco. Both use the same template.
Compliance Report - e-Tag Summary Report	1	Up to 75	Handled outside the System	Preliminary Report is filed by August 1st each year.
Compliance Report - Hourly Meter and e-Tag Reconciliation Report	1	Up to 75	Handled outside the System	Preliminary Report is filed by August 1st each year.

17.3 Data Creation and Data Update Requirements

The RPSD System's data creation and data update requirements are documented in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS. Below is a high-level summary:

17.3.1 Data file uploads, virus scans, data file organization within the RPSD file system, data parsing, data validation, data transformation, and database update

17.3.2 Query and Update of configuration data via web portal and administrative module

17.3.3 Database update upon CPUC Energy Division staff review and acceptance of submitted data

17.3.4 Online data associations or removing associations between shapefiles and RPS Projects/Offers

17.3.5 Requests for new accounts/RPSD System logins

17.3.6 Time lapse based de-classifying confidential RPS data as public data after the time limits expire for Procurement Plans, Compliance Reports, and RPS Offers

17.3.7 Tableau workbook creation and periodic data refreshes in the reports

17.3.8 Maintain association between a Retail Seller primary data submission and its attachments (documents that cannot be parsed and stored as individual data items/ fields) by storing the file path as a database attribute for the related submission among Procurement Plan, Compliance Report, Monthly Report, Semi-annual report, Offer file, and shapefile

17.4 Data Modification/Update Frequency

The following are instances when data needs to be modified or updated:

17.4.1 Override confidential data as non-confidential (done on an ad-hoc basis per CPUC Energy Division staff review and decision as to which data may be made non-confidential)

17.4.2 Configuration data changes using RPS/Django Admin module to modify web page choice lists in the web portal or public website

17.4.3 Activate/De-activate user access when required

17.4.4 Revoke permissions for users that have Tableau based database access when staff role changes

17.5 Data Access Requirements

The RPSD System's data access requirements are documented in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS. Below is a high level summary:

17.5.1 The Retail Sellers submitting data to CPUC must have access to their own data in the database and their historical data file submissions.

17.5.2 One (1) Retail Seller will not have access to another Retail Seller's confidential data or data file submissions unless a data file is non-confidential.

17.5.3 The CPUC Energy Division staff will have access to all the data files, irrespective of who submitted, and both confidential and non-confidential data stored in the database.

17.5.4 Two (2) Tableau roles are defined - one (1) for CPUC Energy Division staff to perform data analysis, another to publish Tableau reports to Tableau Public server. The second role will not have access to confidential RPS data unless confidential RPS data is inadvertently made public.

17.5.5 One (1) or two (2) designated CPUC Energy Division staff will have access to Admin module which can be used to modify configuration data, upload data file templates, upload documents containing help/instructions for using the web portal.

17.5.6 The Contractor staff will have access to Admin module to support CPUC Energy Division staff when required.

17.5.7 All non-confidential RPS data in the database and any data file marked as non-confidential will be available over the public website.

17.5.8 Database access via Tableau must be explicitly configured for the specified user and device.

17.6 User Types, Roles, and Organizations

The following user types/roles exist in the current RPSD System:

- Load Serving Entity (LSE) Submitter - Can upload, submit, and review files
- LSE Reviewer - Can view files submitted by their organization

- CPUC Reviewer - CPUC Energy Division staff have access to all data submitted via the web portal
- RPS Admin - Has access to Django Admin module and can modify configuration data, activate, and deactivate users (both CPUC Energy Division staff and the M&O Contractor may be assigned this role.)

The term LSE applies in the current RPSD System to the three (3) large IOUs (PG&E, SCE, and SDG&E).

In the RPSD System, additional role of an "Attester" will be added who attests to the accuracy of data submitted by their respective organization.

17.7 User Locations/Geographical Distribution

Retail Seller Users are located throughout the State of California. The CPUC has offices in San Francisco, Sacramento, and Los Angeles. However, due to COVID-19, the CPUC Energy Division staff may login from anywhere.

17.8 Data Security Requirements

Data security requirements are documented in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS. A data security categorization document is also available in the RPSD document repository which identifies the risk related to unauthorized data access or exposure, unauthorized data modification, and data unavailability due to System unavailability for any length of time.

17.9 Data Ownership

CPUC owns all the data that is submitted to RPSD System via the web portal, or via a secure FTP site. However, CPUC is obligated to protect RPS data based on confidentiality declaration by the data submitters. Certain data becomes non-confidential when the term limits expire. A background process will transform such confidential data into non-confidential data depending on the time lapsed and the governing rules of confidentiality.

18. Reporting

This section contains the following items:

- Define the data types and/or fields to be system generated
- Define the requirements of the system generated report(s) and data to be provided:
    - Describe the standard form or format
    - Identify who receives the report(s)
    - Define report due dates
    - Define whether ad hoc reporting is required

- Define any project reporting requirements
    - Project status reports
        - Frequency
        - Content

- Weekly, monthly meetings
- Performance meetings and their frequency

18.1 System Generated Data Fields

The RPSD System must generate the CPUC ID, which is a unique ID for each RPS Project, based on the Retail Seller, Technology Type, and a sequence number. The following are examples for a System generated CPUC ID (format: xxx - retail seller id, x/xx - technology type, xxxx - sequence number):

- PG&E Geothermal Project has CPUC ID PGE30045
- SCE Wind Project has CPUC ID SCE70011

The following Technology Types and related codes exist currently:

- 1 - Landfill Gas, Biogas, Digester Gas
- 2 - Biomass, Biodiesel, Muni Solid Waste
- 3 - Geothermal
- 4 - Small Hydro, Conduit Hydro, Ocean/Tidal
- 5 - Solar PV - Rooftop, Solar PV - Ground mount, Solar PV - With Storage, Space Solar
- 6 - Solar Thermal - No Storage, Solar Thermal - With Storage (molten salt)
- 7 - Wind
- 8 - Hybrid

- 9 - Various
- 10 - REC Only

18.2 System Generated Reports

18.2.1 Annual RPS Report to the Legislature

The Annual RPS Report is compiled by CPUC Energy Division staff and contains data in the form of tables and descriptive text, graphs, and charts created from RPS data. While the full report is not System generated, the individual components that fit into the report may come from System generated query results.

The web portal must generate reports capable of producing charts and materials necessary to complete the RPS Annual Legislative Reports (“November 1 Report") as required by Public Utilities Code Section 913.4. CPUC Energy Division staff and the Contractor will review the Annual Legislative Report and map each required reporting component to the source tables at the end of System designs to ensure the required data structures are available in the RPSD System.

18.2.2 Annual Report to Legislature on Costs and Cost Savings for the RPS Program

This Report is compiled by CPUC Energy Division staff based on RPS data.

18.3 Interactive Tableau Reports

Interactive Tableau Reports will be a new feature in the RPSD System. They must be designed by the Contractor and CPUC Energy Division staff, then uploaded to Tableau Public for access via public website. They must be refreshed monthly with new data as a report contains a snapshot of RPS data at a given point in time and is not live data from the database when the report is accessed by the RPSD System users.

18.4 Downloadable Query Results

The RPSD System provides the capability to query RPS data and then download the results set as a comma separated value (csv), Excel, or other formats incorporated at the time of System design and development. They may include Extended/Extensible Markup Language (XML) and JavaScript Object Notation (JSON) formats.

18.5 Downloadable Maps

18.5.1 The RPSD System provides the capability for System users to validate the uploaded shapefiles by visualizing one shapefile at a time over a chosen base map. The data visualization may be downloaded as a graphic (.GIF, .JPG, .PNG,.PDF, or .TIFF format) or saved as a web page.

18.5.2 The RPSD System will provide the capability to query RPS project locations and a few related attributes, and plot them on a chosen base map. These RPS Projects may be of a Technology Type, of a range in capacity, a localized region such as a city or a county, or from a specific Retail Seller. The map can be downloaded as a graphic (.GIF, .PNG, .JPG, .PDF, or .TIFF format) or saved as a webpage. Follow the https://www.cpuc.ca.gov/rps link to review the IOU RPS Contracts map for an example.

18.6 Error Reports

The current RPSD System generates an error file when an uploaded Monthly Report file, Annual Report file, or an Offer file fails data validations. Similarly, the RPSD System must generate an Error Report for the expanded scope of data files when an uploaded Compliance Report file or Procurement Plan file fails data validations done by the System. The uploading user must be able to download the error report, review it, correct data errors in the input file, and upload it again.

18.7 Export File

The current RPSD System generates an export file with one (1) Excel worksheet, no matter how many worksheets are in the uploaded file, based on the validated data of the uploaded file and the database fields that map to the input data. This export file is used as an input for updating the database. Similarly, the RPSD System must generate an Export file for the expanded scope of data files when an uploaded Compliance Report file or a Procurement Plan file passes data validations.

18.8 RPS Power Purchase Transaction Reconciliation Report

The RPSD System/Solution must provide a capability to reconcile transactions between Retail Sellers by recognizing PPA and PSA data in the Monthly and Semi-Annual files, and generate a Transaction Reconciliation Report containing unique transaction IDs for matching both ends (PPA and PSA) of the transaction. The Contractor must discuss the format for this report with CPUC Energy Division staff during requirements validation and technical design phases of the RPSD Project.

18.9 Project Reporting Requirements

18.9.1 The Contractor will submit weekly status reports and monthly status reports to inform CPUC of the progress, impediments, items pending resolution by the CPUC. Besides the weekly status and monthly status reports, the Contractor will be responsible for CR Impact Analysis for the assigned CRs, and Lessons learned report for each deployment.

18.9.1.1 Weekly Status Report includes the following:

- Changes to prior week's status report
- Risk and Issue updates
- Urgent needs/news
- Action Items (or task tracking) with assignees and due dates

18.9.1.2 Monthly Status Report includes the following:

- Activities completed in prior month
- Activities planned for next month
- Known Risks and Issues
- Milestones reached
- Changes in resources
- Approved change requests

18.10 System Status Reporting

The Contractor shall provide the CPUC monthly reports on the status of the RPSD System. These reports must include, at minimum, the following information:

- Server resource (CPU, memory, storage, bandwidth) utilization
- Overall server health

- New and ongoing user-reported incidents
- System administrative issues
- System errors and alerts
- Ongoing maintenance, enhancement, or upgrade activities
- Proactive identification of potential issues

The CPUC may require the Contractor to provide additional information, should there be any need for clarification, in the monthly reports throughout the RPSD Contract. These reports must be provided as Portable Document Format (PDF) or Microsoft Word documents. Statistical information (time series/historical reporting) may be presented in charts (histogram, graph, bar chart, Gantt chart, and pie chart).

All reports and alerts must be delivered via email to the CPUC RPSD Team, either as attachments or hyperlinks. The scope for this reporting includes the web portal, database, and the public website. Any outages related to Tableau Public that impacted RPSD Production System users, if noted, may be mentioned in the System Status Report.

19. Information Security Provisions

The performance of this Contract, the Contractor agrees to protect the confidentiality, integrity and availability of all information provided by the California Public Utilities Commission (CPUC). The Contractor further agrees to implement the following minimum administrative, physical, and technical information security safeguards to comply with the information security provisions specified in State Administrative Manual (SAM) 5305.8.
Reference: https://www.dgs.ca.gov/Resources/SAM/TOC/5300/5305-8

19.1 ADMINISTRATIVE SAFEGUARDS

19.1.1 DATA OWNERSHIP

19.1.1.1 The information being provided by CPUC under this Contract remains the exclusive property of CPUC. This information is not open to the public and requires special precautions to protect from loss and unauthorized use, disclosure, modification, or destruction. This information must not be shared without written permission from CPUC.

19.1.1.2 The Contractor shall have a non-exclusive right to use and process the information for the purposes stated in this Contract. This right shall be revoked immediately upon termination of this Contract. Disclosure of this data to Contractor in the performance of this Contract does not transfer ownership of information to the Contractor or its employees or agents.

19.1.2 INCIDENT REPORTING

All unauthorized or suspected unauthorized access, uses, and/or disclosures of information obtained under this Contract will be thoroughly reviewed by CPUC ISO and the contractor's ISO. The Contractor will comply with the incident reporting requirements in accordance with California Civil Code Section 1798.29, California State Administrative Manual Section 5340.4, and State Information Management Manual Sections 5340-A and 5340-C.

19.1.2.1 The Contractor will immediately notify the CPUC ISO of any information security breach involving information accessed or obtained under this Contract. Immediately, for purposes of this Contract, means not later than 24 hours after a security event is detected.

19.1.2.2 Each party will conduct oversight of its users with access to information provided under this Contract and will immediately notify the other Agency's Information Security Office of any unauthorized or suspected unauthorized accesses, uses, and/or disclosures / (incidents).

Reference: https://cdt.ca.gov/wp-content/uploads/2021/04/TL_12-16_Incident-Response_Final_Remediated.pdf

19.1.3 USE OF INFORMATION

The Contractor acknowledges and agrees that the information furnished or secured pursuant to this Contract will be used solely for the purposes described in this Contract and agrees to implement policies and procedures to ensure the confidentiality, integrity, and availability of said information. The Contractor further agrees that information obtained under this Contract will not be reproduced, published, sold, or released in original or any other form for any purpose other than identified in this Contract.

19.1.4 STATEMENT OF CONFIDENTIALITY

Each party will ensure that all employees who have access to confidential, sensitive, and/or personal information of the other party may be required to file a signed confidentiality statement attesting to the fact that he/she is aware of the confidential nature of the data and penalties for unauthorized disclosure under applicable state and federal law. Copies of signed confidentiality statements must be made available upon request to the CPUC ISO.

19.1.5 EMPLOYEE ACCESS TO INFORMATION

The Contractor agrees that information will be kept in the strictest confidence and only made available to authorized personnel on a "need-to-know" business basis, and only for the purposes authorized under this Contract. The term "need-to-know'' refers to those authorized persons who need information to perform their official duties in connection with the purpose described in the Contract. The parties recognize their mutual responsibilities to protect the confidentiality of information in their custody as provided by law and ensure such information is disclosed only to those individuals, and of such purpose as authorized by the respective laws.

19.1.6 SECURITY AWARENESS TRAINING

The Contractor and all their users authorized to access all information furnished or obtained under this Contract must receive security awareness training prior to accessing such information, and annually thereafter.

19.2 PHYSICAL SAFEGUARDS

19.2.1 ACCESS AUTHORIZATION RECORDS

The Contractor will maintain records of all authorized users and the authorization level of access granted to the information obtained under this Contract.

19.2.2 ACCESS CONTROL

The Contractor will maintain and secure its entire computer system (network, hardware, software, and applications) used in the performance of this Contract in accordance with state policies, standards and procedures held in the State Administrative Manual Chapters 4800 through 5300.

Reference: https://www.dgs.ca.gov/Resources/SAM/TOC/5300/5360

19.2.3 SECURE AREAS

Computer monitors, printers, hard copy printouts, or any other forms of information accessed or obtained under the performance of this Contract must not be viewed by the public or other unauthorized persons as described in the Contract.

19.2.4 SECURE STORAGE

Information in all forms must be stored in areas physically secure and protected from access by unauthorized persons.

19.2.5 MEDIA PROTECTION

The Contractor will employ the use of FIPS 140-2 validated encryption for all confidential information stored on electronic media and obtained in the performance of this Contract. Confidential information obtained by either party in this Contract must be secured in accordance with the State Administrative Manual Chapter 5300.

Reference: State Administrative Manual Section 5300
https://www.dgs.ca.gov/Resources/SAM/TOC/5300

19.2.6 DESTRUCTION OF RECORDS

All records received under this Contract and any database(s) created, copies made, or files attributed to the records received will be destroyed when they are no longer needed for the business purpose for which they were obtained, or within thirty (30) calendar days of termination of the contract, using confidential destruction methods. This information includes information stored on all media both digital and physical. The records shall be securely destroyed in accordance with NIST 800-88.

Reference: http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-88r1.pdf

19.3 INFORMATION SECURITY

Information security is defined as the preservation of the confidentiality, integrity, availability, authenticity, and utility of information. A secure environment is required to protect the confidential information obtained pursuant to this Contract. Confidential information obtained by either party in this Contract must be secured in accordance with the State Administrative Manual Chapter 5300.

19.3.1 ELECTRONIC TRANSMISSION

All confidential information transmitted over a public network must be encrypted end-to-end. The Contractor will use FIPS 140-2 encryption standards and FIPS 140-2 validated methods, and NIST special publication 800-53 control requirements such as, but not limited to, utilizing minimum encryption strength of 256-bit AES and Secure File Transfer Protocol (SFTP) when transferring or encrypting electronic files or information. The Contractor will coordinate with CPUC ISO to implement the above referenced encryption standards to send and receive all information as required.

Reference:
19.3.1.1 NIST special publication 800-53, Rev 5, page F-193, System and Communications Protection Family, Control SC-8 Transmission Confidentiality and Integrity

19.3.1.1.1 http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-53r4.pdf

19.3.1.1.2 http://csrc.nist.gov/publications/PubsSPs.html

19.3.1.2 FIPS publication 197

19.3.1.2.1 http://nvlpubs.nist.gov/nistpubs/FIPS/NIST.FIPS.197.pdf

19.3.1.2.2 http://csrc.nist.gov/publications/PubsFIPS.html

19.3.2 CHANGE CONTROL

All changes to computer systems, hardware, software, file structure, data or record layout, applications, storage media, and network components used for storing and/or accessing information in the performance of this Contract must be approved by the CPUC ISO in writing in advance prior to implementation.

19.3.3 SCREEN-LOCKING

Computers capable of accessing information for the performance of this Contract must not be left unattended and logged on unless secured by a screen-locking process or mechanism to prevent unauthorized access or secured in a locked room not accessible to unauthorized personnel.

19.3.4 AUDITING

The Contractor will maintain an audit trail and record data access of authorized users and the authorization level of access granted to information based on job function. Logs must be made available to the CPUC ISO upon request. The Contractor will allow audits or inspections by individuals authorized by the CPUC ISO at the Contractor's premises during regular business hours, prior notice for purposes of determining compliance with the terms of this Contract.

19.3.5 CLOUD COMPUTING

If the Contractor will be using a cloud computing solution, the solution must follow and meet, or exceed, the special provisions for cloud computing services set by the Department of General Services (DGS) and Department of Technology, and published on the DGS website.

Reference:

https://www.dgs.ca.gov/-/media/Divisions/PD/PTCS/OPPL/Model-Language/CLOUDCOMPUTING_SaaSGP11192021.pdf?la=en&hash=13820BD4DA66DB6A8A17D19BC17BC6

https://www.dgs.ca.gov/-/media/Divisions/PD/PTCS/OPPL/CLOUDCOMPUTINGSPECIALPROVISIONS_Infrastructure-as-a-Service-and-Platform-as-a-Service.pdf?la=en&hash=24218F2AED4E47885FBCB20B1107EA484203EFF3

19.3.6 DISASTER RECOVERY

The Contractor must meet the following disaster recovery objectives:

19.3.6.1 Upon the executed interagency agreement and the installation of the data transfer method, the Contractor shall provide a copy of disaster recovery plan and procedures that address all essential recovery program elements outlined in State Administrative Manual sections 5325 through 5325.6.

In the event of a disaster, as defined in the disaster recovery plan, the Contractor shall notify CPUC as soon as practical, but not later than 24 hours after declaring a disaster; and shall provide a report to CPUC within two (2) business days, or as soon as practical. In the event of a disaster, the Contractor will notify CPUC for their approval when the need to use an outside vendor occurs ensuring all security measures will be maintained.

19.3.6.2 The Contractor, in collaboration with CPUC and a Disaster Recovery Vendor, shall test their ability to meet the requirements of this Contract annually in accordance with State requirements and provide CPUC a report regarding the execution of the test and its outcome.

19.3.6.2.1 The testing must meet the recovery objectives of this Contract and should assess whether or not the Contractor's disaster recovery provisions are capable of meeting the recovery objectives. The Contractor and CPUC will be responsible for establishing and conducting periodic Disaster Recovery tests, which will provide a means for Disaster Recovery Plan documentation maintenance as well as early identification and mitigation of any problems that occur as a result of the test.

19.3.6.2.2 At the minimum, the Contractor, in conjunction with CPUC must conduct one simulation or parallel test of Disaster Recovery a year. This test must exhibit end-to-end recovery capability to meet requirements as described in this Contract.

Reference: http://sam.dgs.ca.gov/TOC/5300.aspx

20. Disaster Recovery

20.1 Disaster Recovery Plan

The Contractor must provide a Disaster Recovery (DR) plan and procedures which address all essential recovery program elements outlined in the SAM sections 5325 through 5325.6, available at https://www.dgs.ca.gov/resources/sam/toc/5300. In the event of a disaster, as defined in the DR plan, the Contractor must notify the CPUC as soon as practical but not later than twenty four (24) hours after declaring a disaster, and must provide a report to the CPUC within two (2) business days, or as soon as practical. The Contractor must request approval from the CPUC when a subcontractor is required in order to ensure all security measures are maintained, utilizing the process in SECTION 12. Key Staff Changes.

The Contractor's DR plan must account for the system availability constraints specified in SECTION 35. Service Level Agreements (SLAs), including:

- Recovery time
- Backup-sites, and
- System redundancy, and resiliency.

20.2 CPUC Information System Recovery Plan (ISRP)

As part of the RPSD Project planning process, the CPUC prepared an ISRP draft document which may be cross referenced by the Contractor when finalizing the DR plan. The ISRP will be made available to the Contractor after Contract award.

20.3 DR Activation

The Contractor must obtain written approval from the CPUC prior to launching the RPSD System on a backup/alternative site.

20.4 DR During M&O

20.4.1 During the M&O period, the Contractor, in collaboration with the CPUC, shall review the DR plan (or ISRP) annually to ensure compliance with current state requirements, and shall provide the CPUC with a report regarding the execution of the simulation/test and its outcome.

20.4.2 The review shall assess whether the Contractor's DR plan provisions are capable of meeting the recovery objectives. This shall provide a means for the DR plan maintenance, as well as early identification and mitigation of any issues which are identified.

20.4.3 The Contractor, in conjunction with the CPUC, shall conduct at least one (1) DR simulation or parallel test each year. This test shall exhibit end-to-end recovery capability to meet requirements as described in the DR plan.

20.5 System Backups for DR

20.5.1 The RPSD System will be hosted in CPUC owned AWS GovCloud account.

20.5.2 The Contractor shall be responsible for configuring backup processes and performing maintenance on the RPSD System and backups. The Contractor shall be responsible for configuring and performing maintenance on any associated sites.

20.5.3 System backups include database, data files, applications, and application data.

20.5.4 AWS CloudEndure may be used to configure DR compatible backups.

20.6 AWS CloudEndure

20.6.1 AWS CloudEndure is a service provided by AWS for DR configurations.

20.6.2 The RPSD Project has budgeted for utilizing AWS CloudEndure for DR setup.

20.6.3 When configured, AWS CloudEndure will take continual backups based on Recovery Point Objective (RPO). The default RPO, which defines the maximum work the business is willing to lose in case of a disaster, is set to five (5) minutes. The backups will contain data that is a maximum five (5) minutes old to fulfill the RPO.

20.6.4 AWS CloudEndure backups are stored at a remote location for use in system recovery when the primary location is impacted by a disaster.

20.6.5 The Contractor will trigger DR using AWS CloudEndure console. The process will activate a remote site and restore the system from the backups.

20.6.6 DR must be simulated/tested and verified once a year to ensure the process and tools work correctly. Such testing/simulation will ensure that there will not be any risk in case of a real disaster.

20.7 Business Continuity Activities

The RPSD System architecture must provide fail-over and disaster recovery to minimize disruption to RPS related business operations. However, there might be unexpected incidents leading to unavailability of the RPSD System comprising RPS database, RPS web portal, and RPS public website for an extended period. The Contractor must support business continuity activities and CPUC's action plan to assure RPS business operations continue when such events occur.

20.7.1 Manual Operations

The following manual operations are performed when the RPSD System is not operational, per the business continuity instructions sent to retails sellers via email.

20.7.1.1 When the data reporting is due, the Retail Sellers will submit data files over the given secure FTP site to the CPUC. These data files will be stored on a CPUD network file share.

20.7.1.2 The CPUC staff will validate, analyze, and report on the collected RPS data using manual review, analysis, and reporting.

20.7.2 Restore Data for Reference

The Contractor must restore the following to an alternative location for historical data review and to answer any public inquiries related to RPS data, when there is a delay in reporting the RPSD System:

20.7.2.1 Restore the RPS database from the most recent backup to an alternative location which CPUC staff can access for reference purposes

20.7.2.2 Restore the RPS file system from the most recent backup to an alternative location which CPUC staff can access for reference purposes

20.7.3 Post Recovery Activities

20.7.3.1 The RPSD System must have a configuration to send an automated email to all the active users about the RPSD system availability, immediately after restoring the System.

20.7.3.2 When the RPSD System is restored for operations, the Contractor must upload and submit the data files collected via the secure FTP site, acting as a proxy to the retail sellers, so the RPSD file system and RPS database are updated with the RPS data collected during the RPSD System unavailability.

20.7.3.3 The Contractor must perform reconciliation and review of the RPS data with the data and reports compiled through manual processes.

20.7.4 User Communication

20.7.4.1 The RPSD System monitoring tools must be configured to send an automated email to all the active users informing them about the RPSD System (web portal and/or public website) unavailability.

20.7.4.2 When no such communication could be sent or when such a communication was unsuccessful, the Contractor must inform the CPUC staff for further communication with the stakeholders.

20.8 CPUC Staff Training

The Contractor must train CPUC staff in business continuity activities that require uploading and submitting data files that are past due, files that were collected by CPUC via a secure FTP site, acting as proxy users for the respective retail sellers.

21. Delivery (Hardware and Software)

This section describes the hardware, software packaging and delivery needs. Since the RPSD System will use a cloud based infrastructure, open source software, cloud based version control software, and software subscriptions, there will not be any physical delivery requirements. The virtual hardware infrastructure will be provisioned from AWS GovCloud, and the software will be downloaded from AWS, open source publishers, or from subscription software providers.

21.1 Hardware Infrastructure

21.1.1 There will not be any hardware procurement or delivery as the RPSD System will use AWS GovCloud based IT infrastructure.

21.1.2 The CPUC will pay for the AWS GovCloud service. A CPUC IT Infrastructure Manager will act as the CPUC AWS Account Manager and will be responsible for AWS invoice review and bill payments.

21.2 Software Infrastructure

21.2.1 All software and tools used in the RPSD Project development except for Tableau and GitHub, will be open source software available in AWS GovCloud platform or can be downloaded from the software publishers and installed on the AWS servers.

21.2.2 The CPUC will procure up to ten (10) Tableau Designer/Creator licenses for the staff and Contractors, as required by the project schedule and resource plan.

21.2.3 The technology platform for building the public website will be decided during the System designs/technical designs phase of the RPSD Project. The Contractor will have the option of choosing the same technology platform as that of the web portal (which consists of Python/Django web framework, WSGI web server, Nginx reverse proxy, Linux OS, and software utilities) or an alternative platform which is subject to approval by the CPUC.

21.2.4 The public website will rely on RPS database, RPS file system in AWS S3, and Tableau Public for accessing RPS data and interactive Tableau workbooks.

21.3 Infrastructure Services Subscription Timeline

The Contractor is responsible for the following tasks:

21.3.1 AWS resource provisioning will be done to setup specific system environments (Development, Testing, Training, Pre-production, and Production environments) as required per the project schedule.

21.3.2 AWS server resources will be provisioned using the CPUC AWS GovCloud Account for setting up the Development environment during the technical design phase.

21.3.3 Subscription to GitHub source code version control and build platform will be activated at the beginning of the project. The Contractor is responsible for administering the GitHub repository. CPUC Energy Division staff and IT personnel will be granted access to the GitHub repository to review and monitor updates to the database and code.

21.3.4 AWS server resources for setting up Testing, Training, Pre-production, and Production environments will be provisioned per the project schedule and per the prior milestone achievement that is related to the final deliverable, whether it be web portal or public website.

The milestones and dependencies are the following:

- Development completion or near completion is required for setting up System & Interfaces Testing environment
- System & Integration testing completion or near completion is required for setting up UAT environment
- UAT completion or near completion is required for setting up Training and Pre-Production environments
- Pre-Production deployment and verification must be completed prior to setting up Production environment for the first time.

21.3.5 Tableau licenses will be activated when required during the system design phase.

21.4 Quantities to Procure, Purchase, or Subscribe

21.4.1 The Contractor Staff will receive two (2) Tableau Designer/Creator licenses.

21.4.2 The required RPSD Project team (designers, developers, and reviewers) will receive subscriptions to the GitHub source code version control and build system.

21.4.3 Tableau Public server will be used in lieu of setting up a CPUC Tableau server. Tableau Public will host the interactive Tableau Workbooks which will be embedded in public website pages for access by its users.

21.5 Software Delivery

21.5.1 All required software will be obtained from the AWS, CPUC, or downloaded from the Internet from the respective software publishers. The CPUC ISO requires all open source software to be obtained from a supporting vendor if it is not provided by the AWS. The Contractor will work with the CPUC in making decisions related to software subscriptions/purchases during the implementation. Software subscriptions/license purchases will be subject to RPSD Project budget constraints and cost controls.

21.5.2 Tableau software will be downloaded from Tableau or obtained from the CPUC IT Services Division.

21.5.3 GitHub version control software client tool may be downloaded from the GitHub site.

21.5.4 The Contractor will upload the tested RPSD software to the production branch of the version-controlled RPSD source code repository.

21.5.5 Open source software documentation, proprietary software (Tableau) documentation, or RPSD custom software documentation will be uploaded to the CPUC owned RPSD document repository into the respective documentation folders.

22. Hardware and Software Needs

This section provides hardware and software requirements for AWS resource provisioning, RPSD System environment set up, and any additional tools required for the System development.

22.1 Hardware Requirements

22.1.1 System Hardware Specifications

22.1.1.1 Virtual hardware is provisioned in the CPUC AWS GovCloud Account.

22.1.1.2 The RPSD System architecture diagram is available in the RPSD document repository. The Contractor will either use the RPSD System architecture diagram or the current RPSD System configuration as a starting point for virtual hardware specifications. The Contractor can make changes to the RPSD System configuration throughout the project.

22.1.1.3 The server resources and their size will differ based on environment type Development, Testing, Pre-production, or Production. The Production environment must use a load balancer, AWS Cloud Watch for monitoring System resources, auto scalable configurations for web portal, public website, and database.

22.1.1.4 The final configuration of servers will be decided during the RPSD System design phase and, based on the range of server configurations offered through AWS GovCloud, which can later be changed during Testing or Production deployment.

22.1.1.5 AWS charges CPUC based on server(s) capacity, rate per hour of server utilization, total number of hours the servers are up in a month, the storage capacity used, and the network traffic that emanates from the RPSD System to the Internet (outbound traffic).

22.1.1.6 The Contractor must shut down the Development, Testing, Training, and Pre-production environments when not in use to control AWS Costs.

22.1.2 Minimum Physical Hardware Specifications

22.1.2.1 Storage Tool/Infrastructure - the RPSD System will utilize the AWS GovCloud's Simple Storage Service (AWS S3) with the auto extension feature.

22.1.2.2 Storage Requirements

The following storage requirements are required for the initial Production system setup which includes the data from the current RPSD System:

- AWS S3 Storage - five hundred (500) GB online (with provision to auto increment and always alert when there is less than twenty percent [20%] free storage) for file storage. A backup storage of one (1) TB with provision for automated increments.
- Provision for forty two (42) database and file system backups - up to thirty (30) daily backups (one each for immediately preceding thirty [30] days) and up to twelve (12) monthly backups (one [1] for each preceding twelve (12) months)
- Storage is used for the data files and for the database.
- DR configuration with AWS CloudEndure, and associated storage

22.1.3 Sample configuration from the current RPSD System include:

- Database Server/RDS
- Web Servers/EC2 machines
- Storage/AWS S3 Storage
- Bandwidth Capacity

22.1.4 System Performance Requirements

The system performance requirements are part of the detailed solution requirements.

22.1.5 Hardware and Software Documentation

22.1.5.1 The RPSD System and database administrators may obtain documentation from AWS and internet sources (Python.org, PostgreSQL.org, or Djangoproject.com).

22.1.5.2 The Contractor must document the setup of all RPSD System environments.

22.1.5.3 The CPUC will provide documentation for the current RPSD.

22.1.6 Required Hardware Features

The Contractor must configure the following hardware features:

22.1.6.1 AWS S3 storage with scalable capacity for files

22.1.6.2 AWS RDS database instance storage with scalable capacity

22.1.6.3 AWS backup storage per RPSD Project data backup and retention requirements

22.1.6.4 Two (2) virtual Central Processing Unit (vCPU) at minimum three (3.0) GHz in the AWS Elastic Compute Cloud (EC2) instance for Production environment

22.1.6.5 Thirty two (32) gigabytes of memory in AWS EC2 instance for the Production environment

22.1.6.6 The AWS EC2 instances in all environments will be running Ubuntu or another Linux operating system (AWS Linux AMI)

22.1.6.7 The AWS EC2 auto scaling will add/remove duplicate instances depending on system load

22.1.7 Current System Hardware Interfaces

22.1.7.1 The CPUC and Contractor teams will be able to login to the AWS environment by configuring local firewalls to allow specific users access to AWS through the organizations' firewall and proxy servers.

22.1.7.2 The Contractor will be provided AWS Command Line Interface (CLI) access to the existing RPSD environments.

22.1.7.3 AWS Console access to the current RPSD System will be granted, when needed.

22.1.8 Alignment of Hardware Specifications and RPSD System Requirements

22.1.8.1 Storage will support the current data to be migrated to the RPSD database and file system with adequate scope for growth

22.1.8.2 Number of web servers (AWS EC2 virtual servers) will scale up based on usage and load on the servers

22.1.8.3 Server size (CPU, memory, and native storage) is determined based on the environment (Development, Testing [system testing and UAT], Training, Pre-production, or Production). Lowest possible size will be chosen with a plan to resize based on the need for a higher capacity to support operational work in non-production environments.

22.1.8.4 Production server size will also be influenced by the number of potential concurrent users

22.2 Software Requirements

All custom software developed by the Contractor must be accompanied by documentation. The current System uses software versions mentioned in Table 27-1 RPSD Software Versions.

22.2.1 Required Software

The software versions below are required for the RPSD System:

- PostgreSQL version 12.x or higher
- Python version 3.7 and standard libraries
- Django version 3.2.12
- Docker version 2.x
- Nginx reverse proxy version 1.x
- uWSGI web server version 2.x
- GitHub cloud based source code version control service
- JavaScript and JQuery version 3.x
- CSS version 2.1 or 3.x
- HTML5
- Bootstrap version 5.1.x
- Uncomplicated Firewall (UFW) Firewall Utility version depending on the operating system

22.2.2 Interface Requirements

The Contractor must implement or retain, if an interface already exists in the current RPSD System, the following interfaces:

- AWS CLI or AWS Elastic Beanstalk (EB) CLI for operational purposes
- Outlook Interface for email notifications
- Access to the RPSD database via Tableau for CPUC Energy Division staff and the RPSD team that requires it
- Access to the RPSD database by ED Data Warehouse program which extracts RPS data (read only) and loads into ED Data Warehouse
- Cron scheduler for invoking batch jobs on the Servers (Data refresh for Tableau workbooks, data push to Tableau Public, data transformation jobs within the RPSD System)
- Implementation of interface to map APIs for ad hoc data visualization of geospatial files on a chosen base map

22.2.3 Software Development

Software must be custom developed by modifying the RPSD code to meet the RPSD System requirements. The current web portal was custom developed using Python, Django, PostgreSQL, JQuery, CSS, Java Script, Bootstrap, and HTML.

22.2.4 Software Upgrade Procedures

AWS Infrastructure upgrades will be the responsibility of AWS. The Contractor will be responsible for deploying system or software upgrades, updates, and new releases.

22.2.5 Software Licensing Requirements

22.2.5.1 The RPSD System must use open source software. When there is a need for an additional component that requires a software license, a perpetual license will be purchased, subject to budget limits, or the software license will be obtained as a Software as a Service (SaaS) from AWS.

22.2.5.2 The Custom Software developed as part of this Contract will be exclusively owned by the CPUC along with specifications, designs, development and testing procedures and plans, architecture diagrams, other technical documentation, version controlled code, configuration, and data repositories, deployment and release management procedures and verification plans.

22.2.5.3 All licenses must be in the CPUC's name.

22.3 Software Development Tools and Utilities

The CPUC must have access to all the software development tools used for the RPSD System. The CPUC, subject to budget limits, will purchase any required tool or subscriptions to cloud platforms. The following development tools and utilities must be used during the RPSD Project implementation, unless stated otherwise:

22.3.1 The Contractor must use the CPUC's account for GitHub cloud based source code version control and build platform.

22.3.2 The Contractor must use the CPUC's account for SharePoint, or the software of their choice, subject to CPUC approval, to conduct defect logging, tracking, and testing.

22.3.3 The Contractor must use shell script and Cron scheduler to automate tasks.

22.3.4 The Contractor must create AWS CloudFormation configuration file in Yet Another Markup Language (YAML) or Java Script Object Notation (JSON) for AWS resource provisioning and configuration.

22.3.5 The Contractor must develop data migration scripts to load data from the current RPSD database to the RPSD database.

22.3.6 The Contractor must develop data migration scripts to move data files from the current RPSD System.

22.3.7 The Contractor must develop any other scripts (data refresh of Tableau workbooks, check database for events, automated email scripts) needed for the RPSD System.

23. Source Code Governance

The following rules, procedures, and controls apply to the RPSD source code governance.

23.1 Source Code Availability

23.1.1 Custom Software

23.1.1.1 The RPSD System will be built upon a copy of the current RPSD System and the source code.

23.1.1.2 GitHub is being used as the source code repository for the current RPSD System. The RPSD Project will obtain a new GitHub subscription through CPUC, and import the current RPSD System source code into the new GitHub repository. The current source code must be copied to the new source code repository as the current GitHub account is owned by the current RPSD System Contractor.

23.1.1.3 The Contractor is responsible for the administration of the source code repository.

23.1.1.4 The source code for the custom software must be accessible to the CPUC. It will be copied periodically at the point of a logical break in the source code development or once a week to CPUC Content Server where it is available for the reviewers.

23.1.2 Commercial Software

23.1.2.1 The CPUC and the Contractor will not have access to the source code of any commercial software used by the RPSD System.

23.1.2.2 The open source software will be available from the organizations that published the software, if needed.

23.2 Source Code Ownership

23.2.1 The CPUC will own the source code (that includes Web applications, APIs/ interfaces, initial data setup scripts, data migration scripts, system installation, deployment scripts, and database schema) developed for the RPSD System.

23.2.2 The source code must be maintained in a version control system (currently GitHub) in either CPUC general account or under the RPSD Project account.

23.3 Project Deliverables with a Software Code Component

23.3.1 All work products and deliverables shall be stored in the RPSD document repository (Content Server, SharePoint RPSD Project folders), and a version controlled source code repository (GitHub) in a format compatible with CPUC document and source code version control standards.

23.3.2 The most current version of all work products and deliverables must be made available for the CPUC.

23.3.3 The CPUC will own all work products designed, developed, and maintained under the Contract.

23.3.4 The Contractor must continually upload all work products to the CPUC owned repositories which are backed up daily.

23.3.5 When a milestone is reached in the implementation phase, the Contractor must upload the final work products to the CPUC owned repositories. The Contractor must email the CPUC RPSD team with the link for the final version of work products for each milestone.

23.4 Method of Source Code Delivery

23.4.1 The source code must be checked in to the source code version control system (GitHub) in the CPUC owned account.

23.4.2 An email must be sent to the CPUC RPSD team with a link to the final and validated version of the RPSD source code.

23.5 Right to Sell

23.5.1 The CPUC will own all the rights including the right to share the source code and documentation with other California State agencies.

23.5.2 The Contractor will not have rights to sell the custom software developed under the RPSD Contract, to other State agencies, private or public organizations, or to individuals.

23.6 Source Code Updates

23.6.1 The source code is maintained in a CPUC owned GitHub (a version control and build platform) account.

23.6.2 The source code version control system provides a main line (trunk) for final versions and branches to work on development or incremental versions.

23.6.3 The source code version control system provides check-out, check-in, versioning, show differences, and merge code procedures for work collaboration.

24. System Interfaces

24.1 List of Interfaces

The following are the list of interfaces in the RPSD System:

24.1.1 Public Website to Tableau Public Interface

This interface facilitates predefined interactive Tableau workbooks to be embedded into web pages of the public website. The interactive Tableau workbooks are hosted on Tableau Public server. The CPUC Energy Division staff or the Contractor will design and create the Tableau workbooks initially and then refresh the data once a month by fetching the latest data from the RPS database.

24.1.2 Web Portal to Office 365 Mail Interface

This interface is part of the current RPSD System which may be continued. This interface is based on Simple Mail Transfer Protocol (SMTP) submission methodology provided by Microsoft.

24.1.3 Tableau Client to RPS Database Interface

This interface requires configuration of the Tableau Client on user's desktop/laptop, the RPS database, the AWS environment, and the CPUC firewall. This interface currently exists for CPUC Energy Division staff. The same procedure may be adopted to configure this interface for the Contractor staff and for any additional CPUC Energy Division staff.

The current procedure to give database access to Tableau users is as follows:

- Define a database role and grant access to specific database tables that are accessed via the Tableau Client
- Configure the RPS database to grant specific role to the user which in turn will provide access to the required database tables/views
- Configure the CPUC firewall so network traffic to and from the user workstation (laptop or desktop) to the RPS database is allowed
- Configure the AWS environment to whitelist user device Internet Protocol (IP) address and allow traffic to the RPS database via a database URL
- Configure the Tableau Client with the RPS database Universal Resource Locator (URL), PostgreSQL driver, Port 5432, and Secure Sockets Layer (SSL)

24.1.4 Data Warehouse Interface to RPS Database

This interface currently exists, and its scope will be expanded to access more data tables that are part of the RPSD System. In this interface, a server side python script will access the RPS database using the database URL and specific port (5432) using PostgreSQL driver over SSL. It extracts the required data and then updates the Energy Division Data Warehouse with the extracted RPS data. The maintenance of this interface is the responsibility of CPUC Energy Division staff. The Contractor must grant the specific database role used by this interface to access the additional tables.

24.1.5 Web Portal to Map Services Interface

This interface allows base maps to be chosen and to plot the shapefile or multiple project locations over the chosen base map. Drawing the shapefile over base map is to let the user validate the uploaded file. Plotting multiple locations is for data visualizations of RPS projects over a given area, of a technology type, and belonging to one (1) or more retail sellers.

24.1.6 RPS Report Upload Script to Tableau Public Interface

This script is a new functionality and is intended for rerunning the Tableau reports to refresh data in an interactive Tableau workbook and upload it to Tableau Public in order to replace outdated reports. The script will be scheduled to run at the desired interval or day and time of the week or date and time of the month. The script will access Tableau Public using URL, login ID and Password set up on Tableau Public server. This script will be automated to run once a month using a Cron or Windows scheduler.

24.1.7 RPS Data Transformation Script to RPS Database Interface

The current RPSD System has a stored procedure that is run once a month to update Tableau Interface tables using the newly reported RPS data. The scope of this script will be expanded to include Compliance Report and Procurement Plan data file submissions, so their data is made available to the Tableau Interface in the required table structures. This script will be automated to run once a month using a Cron on one (1) of the EC2 servers.

24.1.8 PPA and PSA Identification Process to RPSD Interface

This is a new requirement to identify PPAs, and PSAs in the monthly and semi-annual data reported by the retail sellers and update the database with PPA and PSA information.

24.1.9 PPA and PSA Reconciliation Process to RPSD Interface

This is a new requirement to have a separate process for reconciling the PPAs and PSAs between retail sellers and to generate a reconciliation report. This batch process requires an interface to the database.

24.1.10 Web portal to Antivirus Scan Interface

An antivirus scan is required by CPUC ISO before an uploaded file to the web portal is accepted into the RPSD System. The Contractor must implement an antivirus scanning interface to the web portal.

24.2 Documentation Requirements

All the interfaces must have programming specifications or configuration specifications, run-time frequency, and user roles documented. A how to guide must be created to configure/install these interfaces when changes take place to the runtime environment (user login/password, client devices, servers, scripts, resource names or addresses) of the interface. The source code must be part of the source code repository. The documentation (design document, programming specification, and user guides) must be part of the document repository.

24.3 Timeline for Implementing the Interfaces

CPUC will provide the baseline Project Schedule at the beginning of the Project which will be updated when the Contractor delivers Contractor work plan and Project schedule. The delivery of interfaces that impact the web portal must coincide with the delivery of the web portal. The delivery of interfaces that impact the public website must coincide with the delivery of the public website.

25. System Installation

This is an overview of the system installation prerequisites, system installation processes, timelines, and resources to be used for setting up the Development, Testing, Training, Pre-production, and Production environments for the RPSD System. It provides information related to setting up the RPSD System environments and installing the RPSD System.

25.1 Installation Requirements

25.1.1 The RPSD System environments will be setup in the CPUC owned AWS GovCloud Account.

25.1.2 The RPSD codebase is available in a GitHub account owned by the M&O Contractor and CPUC has access to this codebase.

25.1.3 The Contractor will have the option to setup the Development environment using one of the following options:

25.1.3.1 Provision AWS resources in the CPUC AWS GovCloud account, based on the RPSD System architecture, and set up an RPSD Development environment; or

25.1.3.2 Provision AWS resources, to suit the RPSD System architecture, in the CPUC AWS GovCloud account, and restore the current RPSD Production database, and file system, and use them as a starting point. Data masking is required in Development and Test environments to protect the confidentiality of sensitive data. CPUC does not have access to the M&O Contractor's Development and Test environments, and they are not set up in CPUC owned AWS GovCloud account. However, a test database backup and test data file system backup can be obtained from the current M&O Contractor.

25.1.4 The RPSD System, per the proposed Architecture will use two (2) EC2 servers (using Linux AMI or Ubuntu OS) as Web Application Servers and one (1) RDS based on PostgreSQL engine and PostGIS extension.

25.1.5 The RPSD System will use an email interface (Microsoft Office 365 Outlook email) for supporting email notifications for user activation and password reset functionality. The current RPSD System used Microsoft SMTP submission methodology to configure the mail interface.

25.1.6 The CPUC ISO recommends using supported versions of Open Source Software, which are PostgreSQL and Python. This will be discussed with AWS support team and the Contractor.

25.1.7 The required Open Source Software will be downloaded from the respective publishers.

25.1.8 The CPUC will pay for Tableau Designer/Creator licenses and GitHub subscription for the required Contractor team members, CPUC staff, IV&V vendor, and CDT IPOC.

25.1.9 The public website platform decision will be made during design phase of the RPSD Project, and that decision will influence the public website installation requirements. The public website will access the RPS database setup in the CPUC AWS GovCloud account.

25.2 Access to System Installation(s)

25.2.1 The Contractor will have remote access to the CPUC's AWS GovCloud account where the RPSD System will be set up.

25.2.2 Resource provisioning can be done using the AWS Console or CLI.

25.2.3 The AWS CloudFormation configuration may be used to provision and configure AWS resources. The current RPSD System configuration files will be available in the GitHub repository and is accessible to CPUC Staff.

25.3 System Installation Locations

25.3.1 AWS GovCloud has US-West and US-East regions; the primary location will be from US-West region to reduce network hops as all the RPSD System stakeholders are located within the State of California.

25.3.2 The disaster recovery site will be set up in the US-West or US-East region.

25.3.3 The Contractor will be responsible for setting up the RPSD System environments and installing the system. The CPUC AWS account manager will provide necessary support or liaison with the AWS support team.

25.4 Physical Access to AWS Data Centers

25.4.1 The CPUC and the Contractor will not have physical access to AWS data centers.

25.4.2 The AWS provides remote access to AWS resources (virtual servers) that are provisioned within the CPUC AWS Account for the RPSD System.

25.5 Implementing RPSD System Architecture

The Contractor will be responsible for the RPSD System architecture and implementing any changes. The CPUC ISO, upon request, will conduct a review, perform a web site vulnerability scan, and will be available for consultation for website penetration testing.

25.6 Configuring Servers and Installing the Required Software

25.6.1 The CPUC will provide two (2) Tableau Designer/Creator licenses to the Contractor team. The Contractor must install the software themselves.

25.6.2 Tableau client configuration to access RPS database is the responsibility of the Contractor (AWS side) and the CPUC staff (client side).

25.6.3 To enable access to AWS EC2 virtual servers, certain software utilities or client tools may need to be installed on the desktop/laptops of the Contractor and the CPUC staff who need such access. Tools such as Terminal Emulator Utility (PuTTY), Secure Copy (SCP), EB CLI or AWS CLI may need to be installed by the Contractor and CPUC staff.

25.6.4 The CPUC Admins will configure the CPUC firewall to allow certain CPUC users access the RPS database or access AWS resources via an AWS CLI.

25.7 Project Timeframes

25.7.1 A baseline project schedule will be provided upon Contract execution.

25.7.2 The following separate timelines exist in the project schedule for setting up the RPSD environments:

- Development
- Testing
- Training
- Pre-Production
- Production

25.7.3 The Contractor will deploy the RPSD System in the Production environment when the Pre-production deployment was found to be successful, and all the System functionalities are error-free. Before going live, the RPSD System data (database and file system) will be compared to that of the current RPSD System data and any new data that is submitted to the current RPSD System will be copied to the RPSD System.

25.8 Technical Experts/Resources for System Installation or Setup

The Back-End Lead will do the system installation and setup. The Back-End Lead will have the skills as defined in SECTION 11. Key Staff Qualifications and Skills.

26. System Implementation and Integration

The RPSD System will be built upon a copy of the current RPSD System. The codebase will be copied to a new GitHub repository account owned by CPUC. The database backup, file system backup, and configuration backups will be used to create a Development environment, for the RPSD System, in CPUC's AWS GovCloud account. The backups will be preserved for future use. The current RPSD System's operations will continue, and the three large IOUs will continue to report data using the current RPSD System until the RPSD System is operationalized.

Requirements validation and System design phases will provide additional inputs for the custom development of the RPSD System.

26.1 Overview of the System to be Implemented

The RPSD System requirements are summarized below.

26.1.1 Additional Reporting Entities

The RPSD Project (CDT ID: #8660-081) will expand the user base to include additional reporting entities such as SMJUs, CCAs, and ESPs. These reporting entities are collectively referred to as electricity retail sellers.

26.1.2 Increased Reporting

The web portal and database must allow CPUC's Energy Division staff to track additional milestones related to the Western Electricity Coordinating Council (WECC) transmission system, as well as the total amount of RPS generation and procurement expenditures per year for each RPS Project. The monitoring of procurement costs is important due to the legislation for cost containment and the CPUC's duty to minimize the rate impact on customers.

26.1.3 Increased Efficiency and Staff Productivity

The expansion of the RPSD web portal is also necessary to improve CPUC Energy Division staff efficiency and productivity during annual compliance and Procurement Plan reporting. Each year, all electricity retail sellers must submit compliance reports, procurement contracts, and Procurement Plans to CPUC Energy Division staff. Currently all retail sellers submit all these documents manually via email, which results in hundreds of documents that must be transferred manually by CPUC Energy Division staff and stored on the CPUC's electronic file system. Improvements are needed to the current system to realize administrative efficiencies in data collection and aggregation for various RPS program tasks such as legislative reporting, compliance reviews/ determinations and Procurement Plan reviews.

26.1.4 Expanded Functionality of the RPSD Web Portal

26.1.4.1 Add a GIS file storage component within the existing PostgreSQL database capable of storing thousands of existing GIS files specific to RPS Projects online and/ or in development.

26.1.4.2 Add the ability for retail sellers to upload, 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). Provide the ability to remove association between a shapefile and an RPS Project/Offer if the association is incorrect. Extend this functionality of GIS data management to CPUC Energy Division staff.

26.1.4.3 Modify the CPUC database backend to accept additional data files from retail sellers pertaining to RPS Procurement Plans and RPS Compliance Reports.

26.1.4.4 Allow retail sellers to request an RPSD System account/login by submitting their information via an online account request page. Once the designated CPUC Energy Division staff reviews the request, an account is created (or denied), and the new user will receive an email containing the username and temporary password. New users will be required to create a new password that follows current industry standards. The new password webpage must display the password validity criteria.

26.1.4.5 Provide a user dashboard that will allow users to view recent submissions, uploaded data files, search for and query information, and view recent notifications.

26.1.4.6 Redesign the Landing Page's Main Menu to include a Templates tab for retail sellers to access the downloadable file templates with instructions needed for data submission.

26.1.4.7 Implement confidentiality requirements:

- Some of the information that exists in the Database is confidential and cannot be released until the RPS Project, that the information is associated with, has achieved certain milestones. The RPSD web portal will implement the Commission's confidentiality rules by creating various validation rules that revolve around the rules/orders of Commission decisions, and the development of a confidentiality system that will automatically determine what utility data is confidential pursuant to CPUC rules.
- The web portal will also provide a mechanism to enforce confidentiality rules when users try to access data or shapefiles related to Projects and/or Offers.
- Retail Sellers are only permitted to access and download their own information.

26.1.4.8 Expand the administrative function available to CPUC Energy Division staff to administer the RPSD System. Refer to EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS for specifics.

26.1.5 Technology

26.1.5.1 The RPSD System will have an additional database component called PostGIS, to handle Geographical information, which provides two (2) additional data types (Geometry and Geography).

26.1.5.2 The RPSD System may also use mapping software/APIs to provide geographical data visualizations as maps overlaid on base maps.

26.1.6 Non-Functional Requirements

The non-functional requirements for this project include compliance with State of California Digital Accessibility Laws, State requirements regarding information security activities, and system performance and availability.

26.1.7 Project-Transition/Data Migration

The following data must be migrated from the current RPSD System and data files repositories that are held outside the RPSD System:

- Current RPSD System data (from database and data files)
- Historical Procurement Plans that were submitted to CPUC over secure FTP
- Historical Compliance Reports that were submitted to CPUC over secure FTP
- Shapefiles that were submitted to CPUC and available on CPUC Network storage

26.1.8 Public Website

26.1.9.1 Objectives

- Data Access Independence - Let the public access RPS data without contacting the CPUC Energy Division staff
- Staff Productivity - Reduces the time spent by Energy Division staff in answering questions or queries from the public about RPS data.

26.1.9.2 Design

- The public website will be modeled after the California Solar Initiative (CSI) program site (Reference: https://www.californiadgstats.ca.gov/charts/) using Tableau workbook infrastructure and embedding Tableau workbooks in web pages.
- Detailed Solution requirements for the public website and designs will be created by the Contractor in consultation with the CPUC Energy Division staff
- The public website will allow public to search RPS Contracts/Projects and create user-friendly data outputs/visualizations of non-confidential RPS data that is available to the public
- Any data exports/downloads will adhere to the established confidentiality rules

26.1.9 Database Interfaces

26.1.9.1 Tableau Interface to the Database

All the required database tables/views that need to be accessed via Tableau by the CPUC Energy Division staff must be available for the Tableau interface.

26.1.9.2 Energy Division Data Warehouse Interface to the Database

This interface allows the Energy Division's Energy Resource Modeling (ERM) team to extract RPS data using a Python program from a CPUC server directly connected to the RPS database with a predefined role that limits access to specific interface tables/ views. This interface must be granted access to additional database tables created to hold data pertaining to RPS Procurement Plans and RPS compliance reports submitted by all retail sellers.

26.2 System Components & Interfaces

26.2.1 RPS Database

RPS Database is a key component of the RPSD System. The database uses AWS RDS running on PostgreSQL database engine. The RPSD System will need an additional component PostGIS added for geospatial data management. The web portal, the public website, the CPUC Energy Division staff's database interface via Tableau, and the Energy Division Data Extract program will all rely on the RPS database for data access or data management.

26.2.2 Web Portal

26.2.2.1 Web portal currently allows limited data collection from the three large IOUs (PG&E, SCE, and SDG&E). The web portal provides data file templates in excel format, and instructions for submitting Monthly Report, Semi-Annual Report, and Offer file. The user uploads the required file prior to the due date, and when the file is found to be error free by the System validation process, the user can submit the file. The System generates an export file which will be used to update the RPS database. When there is an error, an error file is generated. Users can download error files and export files. After reviewing the error file, the user will correct the raw data file and re-upload a corrected file which will go through data validation and the earlier steps of generating an export file and an error file are repeated. CPUC Energy Division staff will review the data, analyze it, and use it for reporting purposes.

26.2.2.2 In the RPSD System, the userbase is expanded to up to seventy five (75) retail sellers with a provision for ten percent (10%) year over year growth. Each retail seller will have multiple RPSD System users which include: Data Submitter, Data Reviewer, and Attesting Officer.

26.2.2.3 The RPSD System will allow collection and processing (upload, validation, submission, confidentiality report, and attestation) of additional data file types. These additional file types include: RPS Compliance Report, RPS Procurement Plan, and RPS shapefiles. Shapefiles contain the geo location and site map of the RPS Project or RPS Offer.

26.2.3 Refer to the business process flow charts, available in the documents repository, which are part of the detailed solution requirements. The business process flow charts describe the workflow for data file upload and submission for various file types.

26.2.4 Public Website

26.2.4.1 Public website does not currently exist and must be created. The Contractor will have flexibility in choosing the technology platform for the website, subject to CPUC approval. This site must be modeled after California Solar Initiative's Distributed Generation Statistics website whose URL is: https://www.californiadgstats.ca.gov.

26.2.4.2 The public website will rely on the RPS database and file system to provide non-confidential RPS data to the public.

26.2.4.3 Queries, Downloads of results set, Data Visualization via interactive Tableau Workbooks, and download of Tableau Workbooks are allowed via the public website. Downloads of non-confidential data files are also allowed.

26.2.4.4 For a complete list of functionalities and requirements, refer to EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS. These requirements will further be discussed and elaborated to arrive at the public website designs.

26.2.4.5 This website will have integration to Tableau Public via embedded webpage links.

26.2.5 Integration with Tableau Public for Publishing Tableau Workbooks

26.2.5.1 The Contractor must use Tableau Public for hosting interactive Tableau Workbooks containing non-confidential RPS data.

26.2.5.2 CPUC Energy Division Staff and the Contractor will collaborate on designing/ developing the interactive Tableau Workbooks. Each workbook is based on a snapshot (point-in-time) of RPS data, and the reports will be periodically (weekly or monthly) refreshed so they contain the latest data. The Workbook encapsulates the data and provides various ways of looking at the data including graphs and charts.

26.2.5.3 The Contractor must develop scripts for refreshing data in the hosted Tableau Workbooks.

26.2.6 Integration with Tableau Public by Embedding Links in web pages

26.2.6.1 The Tableau workbooks are stored on Tableau Public, a web server hosted by the company that supplies Tableau software (now owned by Salesforce). Tableau customers share their data via Tableau Public at no additional cost.

26.2.6.2 Refer to https://www.cpuc.ca.gov/rps link to see how the embedding of a Tableau workbook hosted on Tableau Public is done. The webpage embeds an HTML page is hosted on the website, which links to the Tableau Public.

26.2.7 Office365 Mail Integration for Alerts and Notifications

26.2.7.1 The current RPSD System has Office365 Mail integration. The same may be continued in the RPSD System. It was achieved through SMTP submission as described in the Microsoft documentation.

26.2.7.2 Currently, the mail is used for generating messages for password management. In the RPSD System, it can also be used for generating alerts when submissions are due or are past due.

26.2.8 Database access from Tableau Client

26.2.8.1 This feature is currently available to the CPUC users. CPUC user's IP address is whitelisted on the AWS side.

26.2.8.2 CPUC user is granted specific database role to access the required data sets for query and analysis.

26.2.8.3 CPUC Network team configures the CPUC firewall to allow the user to go out and access the RPS database via Tableau's PostgreSQL plugin.

26.2.9 Database access from RPS data extraction program used by Energy Division Data Warehouse

This interface is currently available. When the RPSD System is implemented, access to additional datasets (database tables and views) must be granted by the Contractor to the role used by the data extraction program's user login.

26.2.10 Integration with map services for location data visualization on base maps

26.2.10.1 Refer to EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS for the map services integration requirements.

26.2.10.2 The users must be able to visualize all the RPS Project locations, and/or Offers by the Retail Seller, by a jurisdiction, or by a Technology Type over a chosen base map (California City and county map, California Topographical map, and Western Electricity Coordinating Council [WECC] base map must be available as base map options).

26.3 System Implementation & Deployment

The SOW contains payment milestones and the order of implementation activities. Prior to system development, the requirements validation and system designs must be completed and approved by the CPUC. System test plans may be created in parallel to design work, but they do not need to be submitted until development and unit testing are done.

26.4 Organizational Change Management (OCM) Requirements

The OCM activities are covered under user training as defined in SECTION 15. Project (Contractor) Tasks and Deliverable Requirements.

27. Technology Refresh

Prior to starting the development on proposed System, the Contractor must choose the latest versions of various software packages used. The Contractor must test the current functionalities on an upgraded platform before commencing the development work for the RPSD System.

Table 27-1 documents the software versions used by the current RPSD System and known latest version.

Table 27-1: RPSD Software Versions

Software Component/ platform	Version used in the existing RPSD System	Remarks
Python	3.7	Latest Release 3.10.4 (end of support in October 2026) Source: https://www.python.org/downloads/
Django	3.2.12	Latest Official Release 4.0.3 Source: https://www.djangoproject.com/download/ (end of extended support for 3.2 LTS is April 2024)
PostgreSQL	12	Latest Release 14.x (end of support in November 2026) Source: https://www.postgreSQL.org/download/
Bootstrap	5.1.3	Latest Version: 5.1 Source: https://getbootstrap.com/docs/versions/
CSS	2.1	CSS-2021
Linux Distribution	Linux Distro 2 v3.1.2	Amazon Linux AMI or a supported alternative https://aws.amazon.com/mp/linux/ https://aws.amazon.com/amazon-linux-ami/faqs/

Software Component/ platform	Version used in the existing RPSD System	Remarks
HTML	HTML5	HTML5 (no changes required)

28. System Testing and Acceptance Procedures

The following sub-sections provide the RPSD System testing methodology and acceptance criteria for:

- System environments
- Test plans
- Testing and acceptance process
- Entry criteria for production deployment
- Final system acceptance

28.1 System Environments

28.1.1 The Contractor must create the Development, Testing, Training, Pre-production, and Production environments per the RPSD Project schedule.

28.1.1.1 The Development environment includes the following:

- This environment must reside in CPUC's AWS GovCloud account for the RPSD Project. The initial setup must be based on the current RPSD System. Later, the public website must be added to this environment.
- The Contractor may restore data (data files and database) from the current RPSD production System and mask the data to maintain confidentiality. Alternatively, data backups may be obtained from the M&O Contractor's development environment and used for the purpose of setting up the new RPSD Development environment.
- The Development environment will be used for development and to conduct unit testing of the new web portal, database interfaces, and the new public website, as well as to document the test results for review and approval.

28.1.1.2 The Testing environment includes the following:

- This environment is created in CPUC's AWS GovCloud account for the RPSD Project prior to starting the System testing as per the Project Schedule.
- This environment is not required until the web portal development is complete.
- This environment will be used to conduct System testing and interface/ integration testing according to the approved System test plans.
- Data masking is required to protect confidentiality of sensitive RPS data.
- CPUC ISO will conduct a vulnerability scan in the System Testing environment to identify any vulnerability issues early on before the System is deployed in Production environment.

28.1.1.3 The Testing environment includes the following:

- The Testing environment will be created towards the end of System testing completion for the web portal and will be refreshed later for the public website testing.
- The Contractor is responsible for environment creation whereas the CPUC will conduct the UAT and document the results.
- The Contractor will discuss and implement any data masking requirements for this environment with the CPUC staff.
- The Contractor will provide support to UAT by reviewing the issues logged and providing defect fixes, collaborating on CR creation, and implementing any authorized CRs.
- The Contractor will perform UAT environment refreshes to enable iterative testing and regression testing.

28.1.1.4 The Pre-Production environment includes the following:

- This environment will be forerunner to the subsequent Production environment. It will have the same sizing and configurations as the Production system.
- Data masking is not required, and access will be limited to this environment.
- Vulnerability scans and Penetration tests will be conducted in this environment with the help of the CPUC ISO and AWS Support team.

28.2 Test Plans

28.2.1 Unit Test Plans

The following rules apply to unit test plan creation:

- Unit test plans for the web portal must cover all the functionalities and database interfaces. These must be created prior to completing the development of the web portal.
- Unit test plans for the public website must be ready prior to completing the development of the public website.
- Unit test plans must document entry criteria or pre-condition, test bed, transaction description and related data, function being tested, expected outcome, actual outcome, and remarks for explanations or to note errors.
- Unit test plans may include supporting documentation such as sample screen shots, input and output files, snapshots of database data, and file system directory organization.

28.2.2 System and Interfaces Test Plans

The following rules apply to system test plan creation:

- System test plans must conform to CDT's Master Test Plan format located in the RPSD document repository.
- The Contractor is responsible for creating System test plans which include web portal testing, Public website testing, and interface/integration testing.
- System test plans may be created during the System design or development.
- System test plans for the web portal and RPS database interfaces must be documented, reviewed, and approved prior to commencing System testing of the web portal and database interfaces.
- System test plans for the public website must be ready prior to commencing the System testing of the public website.
- System test plans must cover normal business process flows, and alternative or exceptional business process flows.
- System test plans must include end-to-end System testing.

28.2.3 UAT Plans

The following rules apply for UAT plans' creation:

- The Contractor is not responsible for creating UAT plans.

- The CPUC is responsible for creating UAT plans, and they will be available to the Contractor for review as the Contractor needs to provide UAT support, review defects log, and provide defect fixes.

28.2.4 Pre-Production Deployment and Verification Plans

The following rules apply to pre-production deployment and verification plans:

- These plans must test the stability of the System over a specific time period (up to a week).
- Vulnerability scans and penetration testing must be part of this plan.
- Data verification with the legacy system data must be done to verify the common data between the two (2) Systems is consistent and there are no gaps.
- All the Server-side scripts/processes must be tested to verify if they work correctly. These include any automated interfaces.
- Performance testing must be part of these plans.
- Recovery from failure and disaster recovery must be tested as part of this plan.
- Configuration data review and verification must be part of this plan.
- Architecture review and assuring all components are configured and working correctly must be verified as part of this plan.
- Load testing must be included in this plan for the expected load on the database or websites.
- Boundary testing on day, month, and year changes must be part of this plan.

28.3 System Testing and Acceptance Process

28.3.1 System Testing

Contractor testing of deliverables eleven (11) and twelve (12) starts with unit testing, continues with system testing, interfaces/integration testing, pre-production deployment and verification, and ends in production deployment and verification. Issues or defects found must be resolved before the final delivery and acceptance of the deliverable.

28.3.2 Test Results Review and Acceptance

The following rules apply for test results review and acceptance:

- The Contractor must document the test results and submit them along with the

test plans, issue/defects log and CR log to CPUC Business PM.

- The CPUC and the oversight team will review the test results and associated documents, then provide their feedback and action items via email. The review team will update issue/defects log, and CR log.
- The Contractor must review the feedback, action items, updated issue/defects log, and the CR log.
- If the review of test plans or test results prompt the creation of new CRs, the new CRs must go through the Change Control Management process defined in SECTION 14. Change Control Procedures.
- The Contractor must address all critical defects, major defects, and approved CRs, then provide an action plan to CPUC for addressing non-critical defects and CRs.
- When the defects are fixed and/or CRs are implemented, the Contractor must perform regression testing, and document the results for CPUC approval.

28.4 Entry Criteria for Production Deployment

28.4.1 All critical and major issues arising out of system and integration testing, UAT, and pre-production deployment and verification have been resolved. Minor defects must be prioritized for resolution and the project schedule updated.

28.4.2 All critical and major CRs have been implemented prior to the related production deployment. When a CR implementation is postponed, there must be an explanation that is approved by the CPUC.

28.4.3 All minor CRs have been reviewed, approved, and prioritized for implementation. Minor CRs may be implemented whenever possible, during implementation or M&O.

28.4.4 There are no reported performance problems.

28.4.5 There are no security issues; the System passed vulnerability and penetration testing.

28.4.6 Required legacy data has been migrated, compared, and found to have no discrepancies.

28.4.7 The public website access is compliant with Americans with Disabilities Act (ADA) requirements for the public website to go live.

29. Transition of Operation to a Future M&O Contractor

29.1 Transition-Out at Contract Expiration to a Future M&O Contractor

When the Contractor is transitioning M&O to another CPUC Contractor, then knowledge transfer must take place according to a knowledge transfer plan to be created and delivered by the Contractor. The knowledge transfer plan must include joint review of environment setup, data model, schema design, code base, development and deployment procedures, and M&O support.

Prior to the expiration of the Contract, the Contractor shall coordinate with the future M&O Contractor and provide the following:

29.1.1 Documentation review of the RPSD System and its environments

29.1.2 Access to the source code repository and build platform (GitHub)

29.1.3 Transfer knowledge related to System requirements and business processes

29.1.4 Transfer knowledge related to System operations

29.1.5 Review the previously implemented CRs

29.1.6 Conduct a series of meetings where the future M&O Contractor will have an opportunity to ask questions to which the Contractor must respond

29.2 Knowledge Transfer Documentation for a future M&O Contractor

The Contractor must prepare written documentation in the form of a guidebook for future maintenance of the system. Topics in the guidebook must include:

29.2.1 Documentation of System Architecture, sizing, configuration, and setup instructions should environments require future re-creation for any reason

29.2.2 Monitoring and resolving issues with the AWS environment, the PostgreSQL database including the PostGIS component, web portal, and public website

29.2.3 Managing the GitHub source code version control and build platform

29.2.4 M&O procedures for standing up the System, taking backups, backup verification, Vulnerability Scans, Penetration testing, and ISRP testing

29.2.5 Reporting and Escalation procedures

29.2.6 Development, Testing, and Deployment procedures for implementing CRs

29.3 Transition-Out Completion

System Transition is considered successful when:

29.3.1 The future M&O Contractor is able to implement CRs (requires competency in RPSD requirements analysis, CR impact analysis, solution design, development, testing, and deployment), make schema changes, migrate code, configure access permissions, and change configurations for the RPSD System independently;

29.3.2 The future M&O Contractor is able to create a new RPSD environment;

29.3.3 The future M&O Contractor is able to perform ISRP/DR testing and simulate RPSD System recovery;

29.3.4 The future M&O Contractor is able to monitor the RPSD System and respond to events/incidents including defect analysis, System resizing, emergency shut down, and maintenance; and

29.3.5 The future M&O Contractor is able to perform day-to-day operations and keep the System up and running.

30. Knowledge Transfer and/or Training

30.2 Web Portal User Guide

The Contractor shall prepare a web portal user guide to familiarize the System to all categories of users defined in the System.

30.2.1 The web portal user guide must contain a general overview of the System, list of business functionalities/capabilities, screen navigation, user roles, and use cases/how-to quick-start guides/step-by-step instructions for performing different functions organized by role. The web portal user guide will be converted to a PDF file.

30.2.2 The functionalities performed by an RPS Administrator are to be documented separately as this knowledge is restricted to CPUC Energy Division staff and the Contractor. This must not be part of the web portal user guide.

30.3 Training Materials Requirements

30.3.1 The Contractor must prepare the training materials (presentation slides, use cases, examples, labs/exercises, and answer key) for training RPSD System users (retail sellers and CPUC Energy Division staff).

30.3.2 Editable versions of the training materials must be stored in the RPSD document repository.

30.3.3 Electronic copies of the training materials must be made available to the attendees prior to or during the training session/webinar.

30.3.4 The training materials must contain the following topics:

30.3.4.1 An overview of RPSD database, web portal, and public website

30.3.4.2 User roles (Submitter, Reviewer, Attester, CPUC Reviewer, and RPS Admin) and functions each role performs

30.3.4.3 Web portal navigation and downloading of Data File Templates and User Guides

30.3.4.4 Data file templates review

30.3.4.5 Data confidentiality, data tagging, and confidentiality declaration

30.3.4.6 Data file upload, validation, and submission process for various data files

30.3.4.7 Shapefiles upload, validation, and submission process

30.3.4.8 Public website navigation, data query, data visualization, and data downloads

30.3.4.9 RPS Administration (this training material is restricted to CPUC Energy Division staff and the Contractor staff)

30.4 Training Delivery

30.4.1 Training for the Retail Sellers (IOU, SMJU, CCA, and ESP organizations) will be conducted over a webinar by the CPUC Energy Division staff. The CPUC Energy Division staff conducting the webinar will use the Training material and training environment created by the Contractor.

30.4.2 Training for CPUC staff will be conducted by the Contractor at CPUC premises in San Francisco, with provision for some users attending remotely over Webex/Microsoft Teams at CPUC discretion. A recorded training session will be available for future use by the CPUC.

30.5 RPSD Training Environment

The Contractor must create an RPSD System Training environment in consultation with the CPUC Energy Division staff to provide the required coverage for various business use cases. This includes data preparation (database, data file system, and input files) for the training/webinar use cases and labs/exercises. The web portal in the Training environment must be accessible via a public IP address or URL to both CPUC Energy Division staff and to Retail Sellers. The Contractor must review and validate all the training material, use cases, labs/exercises in the Training environment and then refresh the training environment for use by the training/webinar instructor and/or attendees.

30.6 Training Facilities & Equipment

30.6.1 The CPUC will provide a training room.

30.6.2 The CPUC will organize Webex/Microsoft Teams sessions for remote attendees and/or retail sellers.

30.6.3 A web-based Training environment must be accessible to all attendees.

30.6.4 Hardware

30.6.4.1 Each live, in-person training session attendee and instructor will require a laptop or desktop computer with a browser. The equipment will be provided by the CPUC for those attending the training session from CPUC premises. There will be a maximum of twenty (20) attendees at a time in CPUC training room.

30.6.4.2 Remote attendees and remote instructor will be responsible for supplying their own equipment (laptop or desktop with a browser) to connect to the RPSD Training environment.

30.6.5 Software

30.6.5.1 The Contractor must set up a fully functional RPSD application in a Training environment in AWS GovCloud under the CPUC account for the RPSD System

30.6.5.2 The instructor's laptops must have Webex/Microsoft Teams installed when conducting classroom training. CPUC will provide a desktop for the instructor when conducting training from a CPUC training room.

30.6.6 Connectivity

30.6.6.1 Each laptop or desktop must have an internet connection

30.6.6.2 The instructor's laptop or desktop must be connected to a classroom display

30.6.7 Audio/visual equipment

The CPUC is responsible for providing the following:

- Webex/Microsoft Teams terminal
- Projector or large format display in classroom
- Classroom desktop cameras and headphones

30.7 RPS Administrator Manual

30.7.1 The Contractor must create an RPS Administrator manual to serve as a guide for the RPS Admins in performing their role within the RPSD System.

30.7.2 Access to RPS Administrator manual must be restricted to CPUC Energy Division staff and the Contractor.

30.7.3 The RPS Administrator manual must provide step by step instructions with examples and sample screen shots for the following:

30.7.3.1 A how to guide to replace static documents (data file templates, instructions, user guide, or other training materials) on the web portal

30.7.3.2 A how to guide for making configuration changes (choice lists, text messages, error messages, or any metadata about the RPSD System that impacts the look and feel of the web pages)

30.7.3.3 A how to guide for configuring Tableau interface to the RPS database

30.7.3.4 A how to guide for creating interactive Tableau workbooks and uploading them to Tableau Public server

30.7.3.5 A how to guide for setting up the mail interface or how to troubleshoot the mail interface when there is an error

30.7.3.6 A how to guide for making changes to batch process scheduler/CRON settings for running automated scripts

30.7.3.7 A how to guide to activate/de-activate a User

30.7.3.8 A how to guide for embedding interactive Tableau workbooks in web page

30.8 Training Outcomes

30.8.1 The Contractor must compile stakeholder feedback about the RPSD System designs, functionality, and training materials (user guides included) and must incorporate required changes to the training materials.

30.8.2 CPUC will review the updated training materials and provide CPUC approval.

31. Maintenance and Operations (M&O)

This section provides an overview of M&O requirements for the RPSD System, M&O procedures, and the Contractor and State responsibilities. During the M&O period, all critical and major defects related to the RPSD System shall be resolved in accordance with the SLAs defined in SECTION 35. Service Level Agreements (SLAs).

31.1 M&O Requirements

31.1.1 M&O Requirements Overview

The RPSD System will be deployed in two stages. The first stage will cover the RPSD System environment, database, web portal, and interfaces. The second stage will cover the public website. There may be a gap of three (3) to six (6) months between the two (2) production deployments depending on the Project schedule.

The M&O requirements in this section cover:

- The partial RPSD System M&O during the Project
- The full RPSD System M&O after the Project

31.1.2 RPSD System M&O during the Project includes:

- RPSD System M&O for Stage 1
- RPSD System M&O for Stage 2

31.1.3 RPSD M&O after the Project Closure

31.1.3.1 The Contractor must provide M&O support for a period of one (1) year following the successful completion of the RPSD System implementation and acceptance by the CPUC.

31.1.3.2 The second (2nd) and third (3rd) year M&O may be activated by the CPUC at its sole discretion. If the CPUC chooses to activate M&O for the second (2nd) and/or third (3rd) year, a Contract amendment will be executed prior to the expiration of the Contract. This will allow continuous coverage of M&O services without disruption.

31.1.4 M&O Scope

The M&O includes the following items:

- Regular M&O such as monitoring the system, performing backups, and insuring the availability and security of the system
- Incident management related to the RPSD System in the Production Environment
- System upgrades and patches including emergency security patches

- Business proposed system refinements based on requirements changes or user feedback
- System changes related to calendar year changes (modify drop down choice list, required UI changes, and data file reporting templates to accommodate a new year)
- Additional CRs that have a special budget, to implement legislative changes
- CRs created as part of incident/defect resolution to address gaps in the RPSD System functionality, configuration, or environment

31.1.5 RPSD System Upgrades

31.1.5.1 The RPSD System infrastructure will be managed by AWS, and it will comply with the published SLAs they have with the CPUC. The AWS support team will be responsible for any patches to the AWS platform (Security patches related to EC2 Servers, Linux/AWS Linux Amazon Machine Image [AMI] Operating System [OS] version, and RDS based on PostgreSQL engine).

31.1.5.2 The Contractor will be responsible for maintaining the application, user access, monitoring, responding to events, scaling up, and additional provisioning of resources using the AWS Configuration Manager.

31.1.5.3 The Contractor is responsible for applying patches and version upgrades related to Python, Django, or any other underlying software tools, used in the RPSD System development, based on impact analysis and consultation with CPUC ISO.

31.1.5.4 Upgrading to newer versions of Python general release or PostgreSQL generally available versions are the responsibility of CPUC and the Contractor. The decision to upgrade or not will be made by CPUC Energy Division staff, CPUC ISO, and the Contractor based on the cost benefit analysis. The CPUC and the Contractor must strive to be on supported versions.

31.1.5.5 When the versions of the Software used for building the RPSD System (PostgreSQL, Python, Django, and others) go out of support or are being discontinued by the Software publishers, then the RPSD System must be migrated to the later versions of the software. This will be the responsibility of the Contractor. This will include upgrading the System in Development and Test environments first before deploying it to Pre-production and then to Production environments.

31.1.5.6 When the browser versions (Chrome, Firefox, MS Edge, and Safari) go out of support or are being discontinued, the RPSD System must be tested against the later versions and code changes must be made as necessary.

31.1.5.7 The RPSD System compatibility with the recommended versions of the underlying software in Table 27-1 RPSD Software versions must be reviewed and updated as directed by CPUC, when organizations that own/publish the related software provide new releases or security patches.

31.1.6 Emergency Defect Fixes

An emergency fix is defined as a fix that must be applied in order to restore the system back to operation. Emergency fixes will involve configuration or metadata changes, or rolling back a defective release to a previous version. The Contractor must coordinate with the CPUC when applying emergency fixes. Incident responses and emergency fixes must be resolved through a process including problem diagnosis, solution design, impact analysis, development and testing of the fix or solution, verifying results, and deploying the fix in Production environment.

31.1.7 System Downtime

31.1.7.1 The amount of downtime required for an upgrade or for applying a patch, including emergency security patches, must be specified in the incremental release/ update/upgrade/deployment notes.

31.1.7.2 The Contractor must provide release notes for the initial deployment, subsequent incremental deployments, patches, and upgrades.

31.1.7.3 The principal periods of maintenance must be once a week outside the business hours, as defined in SECTION 35. Service Level Agreements (SLAs), for the web portal. The principal period of maintenance must be once a week, between 11:00 PM to 3:00 AM PT for the public website and the database.

31.1.7.4 The secondary periods of maintenance are ad-hoc to address emergency issues including security issues. When needing RPSD System downtime during operational hours, a system alert must be generated about the impending shut down, so the users who are logged into the RPSD System will be aware of the emergency and close their sessions.

31.1.8 DEDs

Activation of M&O requires an approved DED and must follow the processes in SECTION 16. Deliverable Acceptance/Rejection Process.

31.2 Governance for Scheduled Maintenance

31.2.1 Scheduled maintenance must occur outside of State business hours. The scheduled maintenance involving system downtime must comply with Section 31.1.7. System downtime, defined above.

31.2.2 Web portal and/or public website URLs must point to static web pages that indicate maintenance work and expected system availability.

31.2.3 The Contractor must ensure no batch processes or asynchronous processes are active by terminating, where needed, and rescheduling them.

31.2.4 Shut down the components for normal and sequential termination of services (shut down APIs/ web services, give a forewarning to users, force logout users from the web application, then shutdown the web server, force disconnect users who are connected to the database via Tableau or other means; then shutdown the database). While shutting down, the Contractor must disable user access to the system resources other than the URL and static web page.

31.2.5 The Contractor must create backups of all resources (database, file system, software, and configurations) prior to performing maintenance.

31.2.6 The restart process must occur in the following order:

1. Database
2. Web Portal
3. Public Website
4. Scheduled Jobs/Tasks
5. Connectivity to database via Tableau

31.2.7 In case of a failure of any incremental change (or upgrade), the Contractor must restore the system to the state prior to the incremental release.

31.2.8 Scheduled Maintenance and Advance Notification

31.2.8.1 The Contractor must document scheduled maintenance and advanced notification procedures in the RPSD operations manual for the RPSD System Production environment.

31.2.8.2 The Contractor must send a twenty four (24) hour notice via email to the CPUC Business PM about the planned downtime and they will communicate to stakeholders. The CPUC Business PM's approval must be obtained for scheduled maintenance once per month.

31.2.8.3 The Contractor must reschedule any scheduled jobs/processes if they conflict with downtime.

31.2.8.4 The Contractor must plan a website message/alert on the RPSD production web portal, and RPSD public website about the impending maintenance at least six (6) hours before the maintenance window.

31.3 Roles & Responsibilities

31.3.1 Contractor Responsibilities

- The Contractor is responsible for maintenance and restoring operations. In case of an issue, the System state prior to the downtime must be restored.
- Responsibilities with respect to creating backups are defined in 31.2.5.
- When automated backups are configured, the Contractor must validate the backups once a month by restoring them into the Pre-production or Testing environment.
- The Contractor will be responsible for keeping the system running, daily backups, failover, restore procedures, and ensuring access to the system resources (database and file system) for the RPSD users via websites and database interfaces.
- The Contractor will be responsible for system monitoring which is configured to send alerts for system events.
- The Contractor must ensure system availability, performance, and incident response.
- The Contractor must review, update, and test the ISRP.

- The Contractor must be available for remote diagnostics of any issues and must always connect over a secured network.
- The Contractor must be available during regular State business hours via phone for support during critical days that involve Monthly Reporting, Semi-annual Reporting, Compliance Reporting, and Procurement Plan submission due dates. The CPUC may require support for three (3) days around a due date.

31.3.2 CPUC Responsibilities

- The CPUC Business PM must approve, once per month, all planned downtime during status meetings or via email.
- The CPUC must review the updated ISRP and approve the testing once a year.

31.3.3 Joint Responsibility of the Contractor and the RPSD System stakeholders

The Contractor and the RPSD System stakeholders, including the CPUC Business PM are jointly responsible to perform their respective responsibilities identified in this section.

31.3.3.1 Emergency CPUC Contact

In case of an emergency the Contractor may request a CPUC contact, during deployments or new releases to get clarifications or decisions within the required timeframe.

31.4 Incident Resolution Process

The Contractor must use the following process for incident resolution:

1. Log incident, if not already logged by the stakeholders
2. Review and acknowledge incident if logged by other stakeholders
3. Diagnose the issue in the Pre-production Environment, if possible
4. Review data in production, if required
5. Determine the problem and resolution
6. Communicate to the CPUC Business PM about the problem diagnosis and resolution plan
7. Develop and test incident resolution
8. Plan the downtime for incident resolution and communicate to stakeholders

9. Deploy and verify fix
    a. If downtime is needed, the web portal URL and/or public website URL must point to a static web page which provides an alert about downtime
10. Follow the process of sequential shutdown, backup, deploy fix, restore, and verify when the deployment of a fix requires shutdown of the system
11. Make sure the database is up, the web sites are up, and all the interfaces are working
12. Communicate to the CPUC Business PM about the resolution

32. Help Desk/Call Center

The Contractor must provide Help Desk/Call Center or an equivalent service through their M&O team after successful deployment of the RPSD System consisting of RPS database, web portal, and interfaces in the Production environment and acceptance by the CPUC. The scope of supported applications will include the public website when it is successfully deployed into the Production environment.

32.1 Purpose for Help Desk/Call Center

32.1.1 The Help Desk/Call Center service is for RPSD stakeholders to report incidents related to the RPSD System in the Production environment, and to track resolutions by the Contractor.

32.1.2 The Contractor's Help Desk/Call Center will receive information on incidents reported by the stakeholders and respond to those reported incidents.

32.2 Incident Reporting to Help Desk/Call Center

Depending on the channels of communication provided, the RPSD stakeholders will log incidents to a Help Desk/Call Center website provided by the Contractor, report incidents via email, or a phone call to the listed RPSD M&O contacts, during the business hours, and to Help Desk/Call Center contacts, after business hours.

32.2.1 If a Help Desk/Call Center URL is provided by the Contractor to the RPSD stakeholders to log incidents and track incidents, the stakeholders will log into the Help Desk/Call Center website, create incidents, provide updates or clarifications, and monitor the status of incident resolutions.

32.2.2 If a Help Desk/Call Center web application is not provided by the Contractor for reporting and tracking the RPSD System incidents, then a shared incident log file must be maintained by the Contractor which must be available to CPUC Energy Division staff and CPUC ISO.

32.2.3 An email communication must be sent to the stakeholders who reported an incident acknowledging the incident, when steps are taken to resolve the incident, and prior to closing the incident. The email communication may come from the Help Desk/ Call Center website or from the M&O contacts and Help Desk/Call Center contacts.

32.3 RPSD System Stakeholders

32.3.1 CPUC Staff

32.3.1.1 CPUC Energy Division staff have the following roles that require System access:

- Access the RPS database via Tableau
- Access the web portal to track and review data submissions
- Data Warehouse interfacing with the RPS database
- Review and verify the public website content
- Perform RPS Admin role

32.3.1.2 CPUC ISO and security specialists are responsible for vulnerability testing, annual ISRP testing, and reviewing security controls required for System access.

32.3.1.3 CPUC AWS GovCloud Account Manager who tracks the AWS service costs, resource utilization, and cost controls require System access.

32.3.2 Retail Sellers

The following categories of Retail Sellers require System access for RPS data reporting:

- RPSD System users from the three (3) large IOUs
- RPSD System users from California SMJUs
- RPSD System users from CCAs
- RPSD System users from ESPs

32.3.3 Contractor M&O Team

The Contractor M&O team must log cases/incidents and resolutions for tracking purposes and for knowledge reuse purpose.

32.3.4 Additional user groups to be defined as needed

32.4 Problem Resolution Responsibility

32.4.1 The Contractor will resolve reported incidents during the Contract.

32.4.2 The CPUC staff may assist in reviewing the problem, related data, the business process, user access privileges, and resource permissions.

32.5 Problem Resolution Process

32.5.1 The RPSD stakeholders create or help create the incident/problem via one of the channels (website, email, phone call) provided for that purpose.

32.5.2 The Contractor must log the incident in the incident log with a problem title, problem description, time of the incident, incident reported time, reporting person/ process, the system components affected, and any supporting documentation. The incident must be assigned a severity level by the stakeholder or the Contractor.

32.5.3 The incident is reviewed and is acknowledged by the Contractor Help Desk/Call Center staff or by the Contractor RPSD M&O Staff.

32.5.4 The incident is assigned a priority for resolution and then assigned to a technical staff for resolution. The incident log is updated with priority, initial response, initial response date and time, initial response provided by, assigned date, assignee, resolution, resolved by, resolved date, and remarks as the incident goes through the resolution process.

32.5.5 The assigned technical staff will review the incident description, associated attributes, and supporting documentation. The assigned technical staff may consult the incident logger or CPUC staff for any clarifications or for additional data, if required.

32.5.6 The incident logger and/or CPUC staff may provide additional information.

32.5.7 The incident is reproduced or diagnosed with other means and a solution is identified by the assigned technical staff.

32.5.8 If the solution requires code or data model changes, the required changes are made, tested, and then the Business PM is informed to get approval for its promotion to the Production environment.

32.5.9 The solution is promoted to the RPSD Production environment, the incident logger is informed of the resolution. The incident is set to auto-close within three (3) business days.

32.5.10 If the solution does not require any code changes, then a workaround or instructions for avoiding the incident are provided to the incident logger/reporter.

32.6 Escalation Process

The incidents must be resolved based on the assigned severity and priority per the SLAs defined in SECTION 35. Service Level Agreements (SLAs).

When the incident is not resolved in time, the escalation contacts will be approached to accelerate resolution as defined in SECTION 13. Escalation Process.

33. Insurance Requirements

Prior to commencing performance of any work, Contractor shall furnish to the IT Contract Administrator a certificate of insurance that complies with all the requirements set forth herein. If Contractor is self-insured, Contractor shall provide written proof of adequate self-insurance.

33.1 System General Insurance Requirements

33.1.1 All insurance coverage required herein shall remain in force for the complete term of the Contract.

33.1.2 The Certificate Holder on the Contractor’s certificate of insurance shall include the CPUC address as: California Public Utilities Commission, Attention: Wendy Bright, IT Contract Administrator, 505 Van Ness Avenue, San Francisco, CA 94102 and the Contract # (TBD) within ten (10) days of Contract execution.

33.1.3 Contractor’s insurance company shall carry a rating that is acceptable to the Department of General Services (DGS). If Contractor is self-insured for a portion or all its insurance, review of Contractor’s financial information, including a letter of credit, may be required.

33.1.4 If the required Contractor’s insurance expires during the term of the Contract, a new certificate must be received by the IT Contract Administrator at least ten (10) business days prior to the expiration of the insurance. The new insurance shall meet all the requirements of the Contract.

33.1.5 The Contractor shall notify the IT Contract Administrator in writing within five (5) business days prior to the effective date of any cancellation, non-renewal, or material change that affects any insurance coverage.

33.1.6 If the Contractor fails to maintain in effect at all times the insurance coverage required, the State may, in addition to any other remedies it may have, terminate the Contract upon the occurrence of such event.

33.1.7 Any insurance required to be carried shall be primary, and not excess or contributory, to any other insurance carried by the State.

33.1.8 The State shall not be responsible for any premiums, deductibles, self-insured retention, or assessments on the Contractor’s insurance policy.

33.1.9 Any required endorsement(s) must be physically attached to all requested certificates of insurance and not substituted by referring to such coverage on the certificate of insurance.

33.1.10 The policy retroactive date must be displayed on the certificate or insurance and must be before the date the Contract is executed or before the commencement of work.

33.1.11 Inadequate or lack of insurance does not negate the Contractor's obligations.

33.1.12 In the case of the Contractor's utilization of subcontractors to complete the contracted scope of work, the Contractor shall include all subcontractors as insureds under the Contractor's insurance policy or supply evidence of insurance to the State equal to policies, coverage, and limits required of the Contractor, as specified herein.

33.1.13 All insurance required shall allow to the State to pay and/or act as the Contractor’s agent in satisfying any self-insured retention. The choice to pay and/or act as the Contractor’s agent in satisfying any self-insured retention shall be at the sole discretion of the State.

33.1.14 All insurance coverage and limits available to the Contractor shall also be available and applicable to the State.

33.2 Types of Insurance and Coverage Limits

33.2.1 Commercial General Liability: The Contractor shall maintain commercial general liability insurance with limits of not less than $1,000,000 per occurrence for bodily injury and property damage liability combined with a $2,000,000 annual policy aggregate. The policy shall include coverage for liabilities arising out of premises, operations, independent Contractors, products, completed operations, personal and advertising injury, and liability assumed under an insured agreement. The commercial general liability insurance shall apply separately to each insured against whom claim is made or suit is brought subject to the Contractor's limit of liability. The policy must name CPUC, the State of California, its officers, agents, and employees as additional insured, but only with respect to work performed.

33.2.2 Provisions of section 3700 of the California Labor Code require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with such provisions before commencing performance of work.

33.2.2.1 The Contractor shall maintain statutory workers’ compensation and employer's liability coverage for all its employees who are engaged in the performance of the contract, including special coverage extensions where applicable. Employer's liability limits of $1,000,000 are required. A waiver of subrogation or waiver of right to recover endorsement in favor of the State of California must be attached to the certificate of insurance.

33.2.2.2 If your business is a sole proprietorship and does not employ any other individual(s), a signed statement on business letterhead stating, "I certify under penalty of perjury under the laws of the State of California that I do not employ any person in any manner as to become subject to the Workers' Compensation laws of California. I further certify that CPUC shall be notified within thirty (30) days of any changes which results in the business becoming subject to the Workers' Compensation laws of the State of California." Contractor shall provide this letter to the State Contract Manager prior to the commencement of any work.

33.2.3 Automobile Liability: By signing the Contract, the Contractor certifies that the Contractor and any employees, subcontractors or servants possess valid automobile coverage in accordance with California Vehicle Code Sections 16450 to 16457, inclusive. The State reserves the right to request proof at any time.

33.2.4 Professional Liability: Contractor shall maintain Professional Liability covering any damages caused by a negligent error, act, or omission with limits not less than $1,000,000 per claim and $2,000,000 policy aggregate. The Retroactive Date must be shown, and must be on or before the date of the Contract. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the Contract work. If coverage is canceled or non- renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the Contract effective date, the Contractor must purchase “extended reporting” coverage for a minimum of three (3) years after completion of work.

34. Warranty

34.1 Purpose of Warranty

Warranty is to ensure a quality product is delivered by the Contractor. When defects or gaps are discovered in the delivered work products during the warranty period, the Contractor will provide defect fixes and remedies free of cost to CPUC. Defects or gaps discovered after the expiration of the warranty period will not be covered under warranty.

34.2 Warranty Period

The Contractor must provide warranty for the initial Production deployment (consisting of RPS database, web portal, and interfaces) and its acceptance by the CPUC until the full system including the public website is deployed and accepted by the CPUC. The Contractor must also provide an additional one (1) year warranty for the full RPSD System deployment commencing from the CPUC acceptance of the full and final deployment, as per the Contract terms. Services will include response times defined in SECTION 35. Service Level Agreements (SLAs), and cost-free corrections when application defects are deemed critical or major.

34.3 Warranty Scope

Warranty defects are defined as functional or environmental and will be further categorized as critical, major, or minor.

34.3.1 Functional defects - When the System does not perform according to the expectation as defined in the approved requirements and CRs that were implemented prior to the warranty start date

34.3.2 Environmental defects - When problems are reported that have stemmed from configuration or environmental issues affecting system or application stability, performance, and operations

34.4 Severity Levels

When an issue is traced to the RPSD System functionality deployed prior to the Project closure, and not to a subsequent M&O related CR/enhancement, then the issue will be covered by warranty.

The Contractor must address all severity 0 (System down incidents), severity 1 (critical incidents/defects), and severity 2 (major incidents/defects) issues per SLAs. If the Contractor believes the issue does not fall under warranty but falls under M&O, the Contractor will provide written explanation to CPUC for mutual acceptance and decision of where coverage falls under the Contract.

The following table provides examples of Incidents and associated Severities.

Table 34-1 Severity Table

Severity	Description	SLA
0	System or any of the components (database server, file server, website, or system monitoring components) is unavailable	Severity 0: In each month, the Contractor must ensure the system is not offline for more than 0.1% (one tenth of a percentage) of the required availability time.
1	A. User cannot login to the system. B. Vital functionality is unusable to users due to defect(s). C. Users are unable to perform a vital function.	Severity 1: The Contractor must resolve the items that are urgent within one (1) business day.
2	A. Non-vital functionality is unusable for a user. B. Non-vital functionality is unusable due to a defect.	Severity 2: The Contractor must resolve items within two (2) business days.
3	A. Work around has been provided to the user. B. Performance has slowed down.	Severity 3: The Contractor must resolve items within five (5) business days.

Table 34-2 Severity Examples

Severity	Description Example	Remarks
0	Web portal, public website, or RPS database is down and must be restored	Stop other maintenance work and attend to the issue/incident.
1	RPS database was unavailable for access by applications or interfaces (web portal, public website, CPUC Energy Division staff interface via Tableau, and RPS data extract program) during the coverage hours for more than 5 minutes	Investigate the issue and ensure it does not recur.

Severity	Description Example	Remarks
1	Web portal is unavailable, during work hours from 8 AM to 6 PM Pacific time, or not completely functional as noticed by any of the following reasons: • CPUC users are not able to login to web portal whereas they have internet access and access to other web applications (e.g., Microsoft SharePoint, Content Server). • Retail Seller users are not able to login to web portal and the problem was traced to the web portal and not their infrastructure. • Retail Sellers are not able to submit any of the submission files or not able to complete any of the submission processes. • Retail sellers do not have access to their historical data • CPUC staff are unable to perform queries in the web portal. • GIS data visualizations in the web portal are not working correctly - wrong maps/plots, or errors while visualizing individual shapefiles. • GIS data visualizations in the	Investigate the issue, develop a solution, test the solution, and migrate the solution to Production environment. (shut down and restart any system component if needed). Communicate the resolution to CPUC Business PM or stakeholders.

Severity	Description Example	Remarks
	web portal are not mapping RPS project locations correctly. • Public website is unavailable for more than one (1) hour during work/coverage hours. • Web portal performance issues are leading to terminated user sessions or timeouts. • Public website performance issues are leading to timeouts - issues are seen/noted for the past one (1) hour or more.	
2	Browser coverage issue - using a newer version/release of any supported browser, mentioned in the approved requirements document, resulted in an issue, error, or malfunction of the web portal or public website. Note: The web portal and the public website must support Microsoft Edge and Firefox browsers. The application may work on Safari and Chrome browsers due to cross-browser compatibility standards but RPSD System does not currently support the Safari and Chrome browsers.	Diagnose the issue and find a resolution. Implement the resolution in Production environment within the time provided by the corresponding SLA and communicate to CPUC Business PM or stakeholders.

Severity	Description Example	Remarks
2	Monthly process that does automated data refresh of Tableau Public workbooks (that are embedded into web pages in the public website) has an issue or error	Diagnose the issue and find a resolution. Implement the resolution in Production environment within the time provided by the corresponding SLA and communicate to CPUC Business PM or stakeholders.
2	Public website is unavailable for over thirty (30) minutes during work hours/ coverage hours. After one (1) hour of downtime, the issue severity will be escalated to Severity 1	Diagnose the issue and find a resolution. Implement the resolution in Production environment within the time provided by the corresponding SLA and communicate to CPUC Business PM or stakeholders.
2	Web portal performance issues reported by users: • Taking at least twice the time it usually takes to perform the described function (Refer to RPSD Baseline Performance Requirements) • The CPUC provided performance expectations for various functions within the web portal. During UAT, users may choose to relax some performance requirements for update/save functions.	Diagnose the issue and find a resolution. Implement the resolution in Production environment within the time provided by the corresponding SLA and communicate to CPUC Business PM or stakeholders.

Severity	Description Example	Remarks
2	Password reset function is not working	Check email interface and outgoing email issues. Find a resolution within the time allowed by the corresponding SLA. Implement the resolution in production environment and communicate to CPUC Business PM or stakeholders.
2	RPSD Administrator is: • Unable to make a change to the User Status (Active/Inactive); or • Unable to change metadata in a Choice List (dropdown list values).	Diagnose the issue and find a resolution. Implement the resolution in Production environment within the time provided by the corresponding SLA and communicate to CPUC Business PM or stakeholders.
3	Performance has slowed but is within the documented performance tolerance limits specified in the RPSD Baseline Performance Requirements defined in the RTM	Consult with CPUC to prioritize the issue and then to implement a solution.
3	Instructions Page has a documentation error	Consult with CPUC to prioritize the issue and then to implement a solution.
3	Online data dictionary in the web portal has an error	Consult with CPUC to prioritize the issue and then to implement a solution.
3	Template file download function has an error	Consult with CPUC to prioritize the issue and then to implement a solution.

34.5 Knowledge Transfer Documentation for Defect Fixes

The Contractor must provide knowledge transfer to CPUC, by providing detailed documentation of the defect, analysis, defect fix, test plan, and test results during the resolution of defects throughout this warranty period.

34.6 Warranty tasks that are not yet complete at the end of warranty period

The Contractor must complete any pending and work-in-progress warranty items, that are of severity level one (1) and severity level two (2), that are still pending at the end of one (1) year warranty period.

34.7 Defects discovered after the warranty period

After the warranty period expires, any defects discovered or reported that are traced back to the original work products delivered by the Contractor will not be part of the warranty. They will be resolved under the RPSD System M&O.

34.8 Warranty Disputes

Any disputes regarding warranty items will go through the escalation process defined in SECTION 13. Escalation Process. Escalation Process. In the event of a dispute, the CPUC will make the final decision.

35. Service Level Agreements (SLAs)

35.1 Overview

This SLA shall be in effect starting when the web portal is in production and is ready for use by the RPSD System stakeholders. The SLA provides support requirements for the RPSD System Production environment. The SLA defines the response times and the process for acknowledging, analyzing, and resolving incidents affecting the System. The CPUC will coordinate support if the incident response requires AWS support.

35.2 SLA Timeframe & Hours of Coverage

The procedures in this Contract are to be followed twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days a year, unless explicitly stated otherwise.

35.2.1 Regular State business hours are defined as 8:00 AM to 6:00 PM PT, Monday through Friday excluding State Holidays and weekends. The web portal must be available during the regular State business hours.

35.2.2 The public website must be available on State business days from 3:00 AM to 11:00 PM PT.

35.3 Failure to Comply with the SLA

35.3.1 The procedures in this Contract are intended to ensure a specific level of service and service quality. Failure to meet the outlined SLA in this Contract will result in an assessment.

35.3.2 The CPUC allows up to one tenth of a percent (0.1%) of unanticipated downtime during the regular State business hours in any given calendar month. For example, six (6) minutes of unanticipated downtime in a one hundred (100) hour period is acceptable. Any unanticipated downtime exceeding one tenth of a percent (0.1%) will be cause for penalties. Any backlog of unresolved incidents from the prior calendar month will keep accumulating penalties until the maximum penalty is reached.

35.4 Priority and Severity Levels

35.4.1 There are four (4) priority levels to address incidents, as shown in table 35-1 Response Priority table below. Priority is assigned by the Contractor's response team and the CPUC Business PM to document the order in which the issues are to be addressed.

35.4.2 There are four (4) severity levels for reporting incidents, as shown in table 34-1 Severity table defined in SECTION 34. Warranty. Severity is assigned by the stakeholders to describe how severe the impact of the incident is to the business from a business perspective. CPUC has the right to downgrade and incident severity level.

35.4.3 When there are multiple priority 1 items, they must be addressed in the order created. However, the CPUC has the right to change the order of precedence.

35.4.4 Priority 0 items take precedence over all other priority level incidents, and they are resolved in the order reported. However, the CPUC has the right to change the order of precedence.

Table 35-1: Response Priority Table

The following table lists the priorities and corresponding SLAs:

Priority	Incident Description	SLA
0	Any user reported incident with severity 0 described in SECTION 34. Warranty, Table 34-1 Severity Table, that was verified and confirmed by the Contractor	In each month, the Contractor must ensure the system is not offline for more than 0.1% of the required availability time during the required hours. When a priority 0 incident is reported, the Contractor must stop other M&O tasks that are not priority 0, and work on this item. When System down incident is related to a disaster, it is considered an exception. Refer to SECTION 20. Disaster Recovery in addressing incidents related to Disasters (any natural or human made calamity outside the control of the CPUC or the Contractor).
1	Any user reported incident with severity 1 described in SECTION 34. Warranty, section 34-1 Severity Table, that was verified and confirmed by the Contractor	The Contractor must resolve items within one (1) business day.

Priority	Incident Description	SLA
2	Any user reported incident with severity 2 described in SECTION 34. Warranty, section 34-1 Severity Table, that was verified and confirmed by the Contractor	The Contractor must resolve items within two (2) business days.
3	Any user reported incident with severity 3 described in SECTION 34. Warranty, section 34-1 Severity Table, that was verified and confirmed by the Contractor	The Contractor must resolve items within five (5) business days.

35.5 Parties' Responsibilities

35.5.1 Contractor Responsibilities

35.5.1.1 General Responsibilities

35.5.1.1.1 The Contractor’s Service Desk support shall be made available via telephone and via web access during regular State business hours. When there is no access to a Service Desk/Help Desk/Call Center, then email communication to an email distribution list or email to specific contacts/M&O personnel is acceptable.

35.5.1.1.2 The Contractor must provide a Service Manager to act as the single point of contact for issues requiring escalation. The Service Manager shall be available during State business hours. The Contractor must provide Service Manager and a backup contact information. A backup or an alternate Manager contact is required if the Service Manager is unreachable or unavailable.

35.5.1.1.3 The Contractor must comply with any imposed penalties by the CPUC for not meeting the SLAs.

35.5.1.1.4 The Contractor must maintain licenses/subscriptions for all Contractor managed software for the life of the Contract. The Contractor must alert CPUC three (3) months in advance of a license/subscription renewal. CPUC shall pay for the license/subscription costs of software approved by CPUC and used in the RPSD System.

35.5.1.1.5 The Contractor must meet response times (initial response time and resolution time) as defined in section 35.7.

35.5.1.1.6 The Contractor guarantees that the RPSD System implementation and support will be performed consistent with CPUC IT Policies.

35.5.1.2 Data Backup Requirements

35.5.1.2.1 Backup of code and data must be performed daily

35.5.1.2.2 Backups shall be performed at a time that does not negatively impact services or performance

35.5.2 CPUC Responsibilities

35.5.2.1 The CPUC agrees to open support tickets via the Contractor's support system or by email communication to the Contractor's Helpdesk/call center/M&O Contacts and the Contractor PM.

35.5.2.2 The CPUC will determine the appropriate incident priority level in conjunction with the Contractor.

35.5.2.3 The CPUC will be available during State business hours to provide information to the Contractor, if needed.

35.6 Resolution Process

The Contractor's must follow the resolution process as defined in SECTION 32. Help Desk/Call Center

35.7 Incident Response and Resolution Times

The SLAs have two (2) components; initial response and resolution time.

35.7.1 The initial response must include an acknowledgment of the incident (during the required availability times defined in section 35.2.1 and 35.2.2) and an action plan to verify, confirm, and resolve the issues arising from the incident within the following time frames:

- Severity 0 - within fifteen (15) minutes of being reported to the Contractor
- Severity 1 - within one (1) hour of being reported to the Contractor
- Severity 2 - within one (1) business day of being reported to the Contractor
- Severity 3 - within two (2) business days

35.7.2 Resolution times are measured in incident-resolution days defined as the sum total of incident resolution times in business days for each incident. Each incident is allowed a maximum resolution time before contributing toward penalty assessments based on its priority, as follows:

- Priority 0 items - (defined in sub-section 35.8.1.3 and 35.8.3.3 below)
- Priority 1 items - one (1) business day
- Priority 2 items - two (2) business days
- Priority 3 items - five (5) business days

35.8 System Availability and Performance

All performance and response time issues deemed to be caused by the Contractor code, Contractor installed add-ons and/or configurations will be the responsibility of the Contractor. The performance requirements are defined in EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS.

Any down incidents related to disasters (natural calamities, or human made calamities outside the control of the CPUC or the Contractor) are considered exceptions and are managed per the terms described in SECTION 20. Disaster Recovery.

35.8.1 Web Portal Availability

35.8.1.1 Downtime shall be defined as the period that the RPSD System (in part or in whole) is unavailable or degraded (dropped sessions, incomplete transactions) and the reason lies within the Contractor's responsibilities.

35.8.1.2 During the term of this Contract, the Contractor shall work with the CPUC staff identified in the Contract to address any downtime issue through an established issue resolution process and protocol. The Contractor will provide timely status updates regarding the fix for the issue and collaborate with CPUC staff on the deployment of fixes/changes.

35.8.2 Service Availability for System Infrastructure and Interfaces

35.8.2.1 Downtime shall be defined as the period of time that any of the application servers, databases, web services, network, and/or interfaces that support the functionality of RPSD System (in part or in whole) is unavailable and the reason lies within the point of the Contractor's responsibility demarcation.

35.8.3 Public Website Availability

35.8.3.1 Downtime shall be defined as the period that the public website (in part or in whole) is unavailable or degraded (dropped sessions, incomplete transactions) and the reason lies within the Contractor's responsibilities.

35.8.3.2 During the term of this Contract, the Contractor shall work with CPUC staff identified on the Contract to address any downtime issue through an established issue resolution process and protocol. The Contractor will provide timely status updates regarding the fix for the issue and collaborate with CPUC staff on the deployment of fixes/changes.

35.8.3.3 The Contractor represents and warrants that the web portal will not exceed downtime of fifteen (15) consecutive minutes or a total of one (1) hour in any given month during the required hours, during the term of this Contract.

35.9 Penalties for Non-Compliance with SLAs

The Contractor represents and warrants that the web portal, and database access to CPUC Staff via Tableau will be available during State business hours.

The Contractor represents and warrants that the public website will be available for access by Public on State business days from 3:00 AM to 11:00 PM PT; and the AWS Infrastructure (database, network, webservers, and monitoring tools) supporting the public website are available on State business days from 3:00 AM to 11:00 PM PT. When the public website is down for any reason, the URL for public website must point to a static page that indicates System outage. When access to the public website is restored, the URL for public website must point to the active public website.

The following clauses apply when determining penalties for non-compliance of the SLAs during RPSD System Production support. Maximum penalty in a month across all priority incidents will not exceed twelve thousand dollars ($12,000).

35.9.1 Priority 0

35.9.1.1 Time in excess of one tenth of a percent (0.1%) will be penalized at a rate of two hundred dollars ($200) every fifteen (15) minutes.

35.9.1.2 Penalties will be waived when the System downtime is attributed to items that are outside of the Contractor's control, such as AWS Cloud services unavailability or any disaster leading to personnel unavailability.

35.9.2 Priority 1

35.9.2.1 Penalties for Priority 1 incidents will be assessed on the basis of incident-resolution days exceeding one (1) business day per incident. For example, a single Priority 1 incident that is resolved after three (3) business days, accumulates two (2) incident-resolution days of delay; two (2) priority 1 incidents resolved after two (2) business days, accumulates two (2) incident-resolution days.

35.9.2.2 Delays in resolving Priority 1 incidents will begin incurring a five hundred dollars ($500) penalty per incident-resolution day in excess of one (1) incident-resolution day.

35.9.3 Priority 2

35.9.3.1 Penalties for Priority 2 incidents will be assessed on the basis of incident-resolution days exceeding two (2) business day per incident. For example, a single Priority 2 incident that is resolved after three (3) business days, accumulates one (1) incident-resolution day of delay; two (2) Priority 2 incidents resolved after four (4) business days, accumulates four (4) incident-resolution days.

35.9.3.2 Delays in resolving Priority 2 incidents will begin incurring a three hundred dollars ($300) penalty per incident-resolution day in excess of two (2) incident resolution days.

35.9.4 Priority 3

35.9.4.1 Penalties for Priority 3 incidents will be assessed on the basis of incident-resolution days exceeding five (5) business day per incident. For example, a single Priority 3 incident that is resolved after six (6) business days, accumulates one (1) incident-resolution day of delay; two (2) Priority 3 incidents resolved after seven (7) business days, accumulates four (4) incident-resolution days.

35.9.4.2 Delays in resolving Priority 3 incidents will begin incurring a two hundred dollars ($200) penalty per incident-resolution day in excess of five (5) incident-resolution days.

35.10 Service Level Management Plan

35.10.1 The Contractor must create, update, and maintain a Service Level Management Plan.

35.10.2 The Contractor shall include in its Service Level Management Plan, a plan for ongoing management for the SLAs, including tracking, managing, approving, and reporting, as well as procedures for continuous improvement of processes and service activities where necessary.

35.11 Defects

Defects are defined as follows:

- Critical Defect - A defect that may result in the failure of the system, subsystem, software (program or module) within the system, or data loss/ corruption

- Major Defect - A defect that may result in the failure of the system, subsystem, software (program or module) within the system, or data loss/ corruption; however, a work-around may exist to mitigate the issue
- Minor Defect - Minor defects cause the system to produce incorrect, incomplete or inconsistent results, or impairs the system's usability. Minor defects do not cause data loss/ corruption. Minor defects do not cause a system failure. A work-around may exist to mitigate the issue.

36. Unanticipated Tasks

36.1 Budget for Unanticipated Tasks

36.1.1 The awarded Contract will add money in the amount of ten percent (10%) of the total Contract value for unanticipated tasks at time of award. In the event that additional work must be performed which was wholly unanticipated and is not specified in the SOW, but which in the opinion of both parties is necessary to the successful accomplishment of the general scope of work outlined in the deliverables, the procedures outlined in this section will be employed.

36.1.2 The CPUC has the right to activate this amount when needed.

36.1.3 If a CR exceeds the budget for unanticipated tasks, then CPUC will reprioritize the approved CRs and may push one (1) or more unimplemented CRs to the M&O stage.

36.2 Approving Unanticipated Tasks

36.2.1 For each unanticipated task, an EXHIBIT I: WORK AUTHORIZATION (WA) will be developed by the CPUC Business PM and the Contractor to detail the task required in order to complete the original deliverables.

36.2.2 It is understood and agreed by both parties to this Contract that all the terms and conditions of this Contract shall remain in force with the inclusion of any such Work Authorization (WA). A WA shall in no way constitute a Contract other than as provided pursuant to this Contract, nor in any way amend or supersede any of the other provisions of this Contract.

36.2.3 Each WA shall consist of deliverable number, deliverable name, and the WA task(s) to be completed by the Contractor.

36.2.4 All WAs for unanticipated tasks must be in writing prior to beginning work and signed by the Contractor and the CPUC.

36.3 CPUC Right to Stop Work

The CPUC has the right to require the Contractor to stop or suspend work on any WA pursuant to the "Stop Work" provision of the SECTION 38. GSPD-401IT General Provisions – Information Technology.

36.4 Budget Controls

Personnel resources will not be expended (at a cost to the CPUC) on task accomplishment in excess of estimated work hours required unless the procedure below is followed:

1. If, in the performance of the work, the Contractor determines that a WA to be performed under this Contract cannot be accomplished within the estimated work hours, the Contractor will immediately notify the CPUC in writing of the Contractor's revised estimate of the work hours which will be required to complete the WA in full.
2. Upon receipt of such notification, the CPUC may:
    a. By amendment to the WA, the CPUC may authorize the Contractor to expend the estimated additional work hours or service in excess of the original estimate necessary to accomplish the WA (such an authorization not unreasonably to be withheld); or
    b. Terminate the WA; or
    c. By amendment reduce the scope of the WA in order to define tasks that can be accomplished within the remaining estimated work hours.

36.4.1 The CPUC will notify the Contractor in writing of its election within five (5) business days after receipt of the Contractor's notification. If notice of the election is given to proceed, the Contractor may expend the estimated additional work hours or services. The CPUC agrees to reimburse the Contractor for such additional work hours.

37. Budget Detail and Payment Provisions

37.1 Payment Provisions

37.1.1 For approved and accepted deliverables and upon receipt and approval of Contractor's invoices, the CPUC agrees to pay Contractor for services accepted in accordance with EXHIBIT C: COST WORKSHEETS. Acceptance of services for each deliverable shall require a completed EXHIBIT E: DELIVERABLE ACCEPTANCE DOCUMENT (DAD), prior to submitting an invoice.

37.1.2 Invoices shall include the Contract Number, Deliverable Number, Title, and Cost as identified in EXHIBIT C: COST WORKSHEETS, and/or any Deliverable Expectation Documents. Upon completion and acceptance of each deliverable, but not more frequently than monthly in arrears, Contractor shall submit electronic invoices to ITinvoices@cpuc.ca.gov.

37.1.3 The Contractor may not invoice the CPUC for any costs exceeding the maximum amount authorized to complete a specific deliverable. Any excess shall be at no cost to CPUC unless pre-approved by the CPUC where circumstances beyond the control of the Contractor have occurred.

37.1.4 In accordance with Public Contract Code §12112, the State will withhold from each invoice payment amount to the Contractor, an amount equal to ten percent (10%) of the payment. Such retained amount shall be released to the Contractor upon the CPUC’s final system acceptance.

37.1.4.1 Final billing for the ten percent (10%) withhold must be received by the CPUC within ninety (90) days after the CPUC's final system acceptance.

37.1.5 Travel expenses are not reimbursed.

37.1.6 Any penalty assessments for Contractor M&O services will be deducted from the subsequent M&O invoices.

37.2 Budget Contingency Clause

37.2.1 It is mutually agreed that if the California State Budget Act for the current fiscal year and/or any subsequent fiscal years covered under this Contract does not appropriate sufficient funds for the program, this Contract shall be of no further force and effect. In this event, the State shall have no liability to pay any funds whatsoever to Contractor or to furnish any other considerations under this Contract, and Contractor shall not be obligated to perform any provisions of this Contract.

37.2.2 If funding for the purposes of this program is reduced or deleted for any fiscal year by the California State Budget Act, the State shall have the option to either cancel this Contract with no liability occurring to the State, or offer a Contract amendment to the Contractor to reflect the reduced amount.

37.3 Prompt Payment Clause

Payment shall be made in accordance with, and within the time specified in, Government Code Chapter 4.5, commencing with Section 927. Payment to small/micro businesses shall be made in accordance with and within the time specified in Chapter 4.5, Government Code 927 et seq.

37.4 Unanticipated Tasks

Payment for unanticipated tasks shall be as described in SECTION 36. Unanticipated Tasks.

38. GSPD-401IT General Provisions – Information Technology

The Contract awarded as a result of this solicitation shall automatically incorporate by reference the General Provisions - Information Technology (GSPD - 401IT), which can be downloaded using the following URL:

https://www.dgs.ca.gov/-/media/Divisions/PD/PTCS/OPPL/Model-language/IT/ITGeneralProvisions11192021.pdf

39. Miscellaneous

39.1 Public Website Platform

39.1.1 The CPUC is open to recommendations on the technology platform for the public website subject to budget constraints and compliance with State policies and security requirements. The Contractor may use the same technology platform as the web portal which is based on Python/Django web framework or recommend an alternative.

39.1.2 The following technologies may be noted when considering alternatives:

- The https://californiadgstats.ca.gov website uses a component from https://www.highcharts.com/ for exporting/downloading image files (charts, graphs, and maps) from their website. This component is a JavaScript library.
- The public website will be linked to the https://www.cpuc.ca.gov website via an HTML page (https://www.cpuc.ca.gov/rps) and URL redirection or by integration.

39.2 Public Website Design

The Contractor will design the public website as part of the RPSD Project in consultation with CPUC Energy Division staff, CPUC Enterprise Architect, and CPUC Information Security Officer (ISO).

39.3 Restrictions on Offshore Work

The Contractor must conduct work for the RPSD Project within the United States due to SAM policy and AWS GovCloud access restrictions. All cloud-hosted data must be stored within and accessed from the United States, per SAM policy 4983.1, paragraph 15.

Reference: https://www.dgs.ca.gov/Resources/SAM/TOC/4900/4983-1

39.4 Remote Work Flexibility

39.4.1 Due to the current COVID-19 situation and unknown future, Contractor remote work is acceptable based on Bidder's proposed approach and final negotiated agreement between the Contractor and the CPUC.

39.4.2 The CPUC will not provide equipment (cubicle, desk, desktop computer, phone, network cables, etc.) to the Contractor's Key Staff to work remotely. Access to the CPUC network will be available remotely through a VDI account. The CPUC reserves the right to review the Key Staff's ability to work remotely if the timely delivery of tasks and deliverables becomes an issue.

39.4.3 The CPUC intends to resume on-site office work and meetings, knowledge transfer sessions, trainings, and similar activities when the COVID-19 situation is resolved.

39.4.4 If on-site work resumes, it will take place in the CPUC's San Francisco office at 505 Van Ness Avenue, San Francisco, CA 94102.

ATTACHMENT 2: INTENT TO BID

California Department of Technology
Statewide Technology Procurement
P. O. BOX 1810, MS Y12
Rancho Cordova, CA 95741

Telephone: (916) 460-9825
Email: David.sanchez@state.ca.gov

Contact Information
Name:
Address:
City, State and ZIP Code:
Telephone:
E-Mail:

Sincerely,

Signature and Contact Information		
_____ Name (Signature)	_____ Name and Title	_____ Email
_____ Company	_____ Telephone	

ATTACHMENT 3: CONFIDENTIALITY STATEMENT

As an authorized representative or corporate officer of the company name below, I have the authority to bind the company contractually, and I agree that all persons employed by this company will adhere to the following policy:

All information belonging to the California Department of Technology (CDT) or its affiliated agencies is considered sensitive and confidential and cannot be disclosed to any person or entity that is not directly approved to participate in the work required to execute this Agreement.

I certify that I will keep all project information including (but not limited to) information concerning the planning, processes, development or procedures of the project, and all communication with CDT or its affiliates related to any procurement process, confidential and secure. I will not copy, give or otherwise disclose such information to any other person unless CDT has on file a Confidentiality Statement signed by the other person(s), and the disclosure is authorized and necessary for the project. I understand that the information to be kept confidential includes, but is not limited to, specifications, administrative requirements, terms and conditions, concepts and discussions, as well as written and electronic materials. I further understand that if I leave this project before it ends, I must still keep all project information confidential. I agree to follow any instructions provided by the project relating to the confidentiality of project information.

I fully understand that any unauthorized disclosure I make may be basis for civil and/or criminal penalties. I agree to advise the Contract Manager .immediately in the event of an unauthorized disclosure, inappropriate access, misuse, theft or loss of data.

I warrant that if my company is awarded the Contract, it will not enter into any agreements or discussions with a third party concerning such materials prior to receiving written confirmation from the State that such third party has an agreement with the State similar in nature to this one.

All materials provided for this Project, except where explicitly stated will be promptly returned or destroyed, as instructed by an authorized CDT representative. If the materials are destroyed and not returned, a letter attesting to their complete destruction, which documents the destruction procedures, must be sent to the Contract Manager before payment can be made for services rendered. In addition, all copies or derivations, including any working or archival backups of the information, will be physically and/or electronically destroyed within five (5) calendar days immediately following either the end of the Contract period or the final payment, as determined by the contracting Agency/ state entity.

All personnel assigned to this project shall be provided a Confidentiality Statement and will be expected to sign and return it to the State's project manager before beginning work on this project.

CONTACT INFORMATION AND SIGNATURE					
Representative Name:		**Title:**		**Phone Number:**	
Company Name:					
Address:					
City/State/Zip Code:					
Signature:					
Date:					

ATTACHMENT 4: RESPONSE TO ADMINISTRATIVE REQUIREMENTS

The Bidder must indicate agreement to each of the Administrative Requirements in the table below as described in Section, ADMINISTRATIVE REQUIREMENTS DOCUMENT (M). By indicating "Yes," the Bidder affirms that it understands the requirement and agrees to comply with the requirement. Answering "No" to any of the mandatory administrative requirements in the Final Proposal will deem the Bidder non-responsive and will be the basis for rejecting the Bidder's proposal.

«=solicitation_type_abbreviation» Section AND ADMINISTRATIVE REQUIREMENT - RFP SECTION ADMINISTRATIVE REQUIREMENTS	Bidder Agrees Yes / No
SECTION 3.2. ABILITY TO PERFORM	☐ Yes ☐ No
SECTION 3.3. PRIMARY BIDDER	☐ Yes ☐ No
SECTION 3.4. SUBCONTRACTORS	☐ Yes ☐ No
SECTION 3.5. AMENDMENT	☐ Yes ☐ No
SECTION 3.6.1. FINANCIAL STABILITY	☐ Yes ☐ No
SECTION 3.8.1. CLOUD COMPUTING - SOFTWARE AS A SERVICE	☐ Yes ☐ No
SECTION 3.8.2. CLOUD COMPUTING SERVICES SPECIAL PROVISIONS	☐ Yes ☐ No
SECTION 3.13. SOCIOECONOMIC PROGRAMS	☐ Yes ☐ No
SECTION 3.14. PRODUCTIVE USE REQUIREMENTS	☐ Yes ☐ No
SECTION 3.14.1. CUSTOMER IN-USE	☐ Yes ☐ No
SECTION 3.14.2. HARDWARE/EQUIPMENT	☐ Yes ☐ No

«=solicitation_type_abbreviation» Section AND ADMINISTRATIVE REQUIREMENT - RFP SECTION ADMINISTRATIVE REQUIREMENTS	Bidder Agrees Yes / No
SECTION 3.14.3. RUSSIA-UKRAINE CONFLICT ECONOMIC SANCTIONS	☐ Yes ☐ No

ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105

ATTACH THE BIDDER DECLARATION GSPD-05-105 AS ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105.

The Bidder Declaration GSPD-05-105 and its instructions are available as a fill and print PDF at:

https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/gspd05-105.pdf

ATTACHMENT 6: WORKERS' COMPENSATION CERTIFICATION

The undersigned in submitting this document hereby certifies the following:

I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with such provisions before commencing the performance of the work of this Contract.

Signature and Contact Information	
_____ Signature	_____ Date
_____ Name and Title (Print or Type)	_____ Street Address
_____ Firm Name	_____ City, State, Zip Code

ATTACHMENT 7: DVBE DECLARATIONS

ATTACH THE STD 843, DISABLED VETERAN BUSINESS ENTERPRISE DECLARATIONS AS EXHIBIT ATTACHMENT 7: DVBE DECLARATIONS.

The STD. 843, Disabled Veteran Business Enterprise Declarations and its instructions are available as a fill and print PDF at:

https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/pd_843.pdf

ATTACHMENT 8: BIDDING PREFERENCES AND INCENTIVES

THE BIDDER MUST COMPLETE ALL SECTIONS BELOW AND SUBMIT WITH ITS PROPOSAL.

1. SMALL BUSINESS PREFERENCE:

Bidder must check the appropriate box from the choices below.

SMALL BUSINESS PREFERENCE	
☐	I am a DGS certified Small Business and claim the Small Business Preference. My DGS Small Business certification number is:
☐	I have recently filed for DGS Small Business Preference but have not yet received certificatio claiming the Small Business Preference.
☐	I am not a DGS certified Small Business, but 25% or more of the revenue from the award will g certified Small Business subcontractors performing a Commercially Useful Function and ther claiming the preference. *Bidder must complete and submit Exhibit: GSPD-05-105 BIDDER DECLARATION, indi percentage of the revenue that will be received by each DGS certified Small Business subc The form can also be found at the following link:* https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/gspd05-105.pdf
☐	I am not claiming the DGS Small Business Preference.

2. DVBE INCENTIVE:

Bidder must check the appropriate box from the choices below.

	DVBE INCENTIVE:
☐	I am a DGS certified DVBE. A copy of my STD. 843 form is attached. https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/pd_843.pdf
☐	I have recently filed for DGS DVBE certification, but have not yet received certification.
☐	I am not a DGS certified DVBE, but a percentage of the revenue will be going to DGS certif Subcontractors performing a Commercially Useful Function, and therefore I am claiming t incentive. *Bidder must submit a Exhibit: GSPD-05-105 BIDDER DECLARATION, indicating the percent revenue that will be received by each DGS certified DVBE subcontractor. Bidder must also EXHIBIT, STD 843 DVBE DECLARATIONS, for each DVBE subcontractor, signed by the DV manager.* The form can be found on the following link: https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/gspd05-105.pdf https://www.documents.dgs.ca.gov/dgs/fmc/gs/pd/pd_843.pdf
☐	I am not claiming the DVBE incentive.

3. ADDITIONAL BIDDING PREFERENCES:

The Bidder shall check the appropriate box from the choices below.

	ADDITIONAL BIDDING PREFERENCES:
☐	I am not claiming the TACPA preference.

ADDITIONAL BIDDING PREFERENCES:	
☐	I am claiming the TACPA bidding preference. *Bidder must submit TACPA PREFERENCE REQUEST FORMS.* The forms can be fou following link: https://www.dgs.ca.gov/PD/Services/Page-Content/Procurement-Division-Services-List-Folde Request-a-Target-Area-Contract-Preference

Name of Bidder: _____

Signature and Date: _____

ATTACHMENT 9: COMMERCIALLY USEFUL FUNCTION (CUF) CERTIFICATION

THE BIDDER MUST COMPLETE AND SUBMIT WITH ITS PROPOSAL.

Bidder Name: _____

Subcontractor Name (submit one form for each SB/DVBE (prime and/or subcontractor(s)) : _____

Mark all that apply: DVBE: ☐ Small Business: ☐ Micro Business: ☐ N/A: ☐

All certified small business (SB), micro business (MB), and/or DVBE Contractors, subcontractors or suppliers must meet the commercially useful function requirements under Government Code Section 14837 (for SB), Military and Veterans Code Section 999 (for DVBE), and Title II California Code of Regulations, Section 1896.4 and 1896.62.

Answer questions 1-5 below, as they apply to your company for the goods and/or services being acquired in this solicitation. A California certified SB, MB, or DVBE business must be deemed to perform a Commercially Useful Function (CUF) by meeting **ALL** of the following CUF requirements for Contract award consideration.

CUF Requirements			
1.	Is responsible for the execution of a distinct element of the resulting Contract.	Yes ☐	No
2.	Carries out its obligation by actually performing, managing, or supervising the work involved.	Yes ☐	No
3.	Performs work that is normal for its business services and functions.	Yes ☐	No
4.	Is responsible, with respect to products, inventories, materials, and supplies required for the Contract, for negotiating price, determining quality and quantity, ordering, installing, if applicable, and making payment. If this is a SERVICE with **NO** goods involved, check **N/A** and go to #5.	Yes ☐	No or N/
5.	Is not further subcontracting a portion of the work that is greater than that expected to be subcontracted by normal industry practices.	Yes ☐	No

If the answer to any of the five (5) questions is “NO” (except for #4 when marked with “N/A”), may result in your proposal being deemed non-responsive.

The Bidder must provide a written statement below detailing the role, services and goods the subcontractor(s) will provide to meet the commercially useful function requirement. If the Bidder is not claiming a SB or DVBE, indicate “Not claiming a preference” in the box below.

Written Statement or Statement of No Claim

At the State’s option prior to award, the Bidder may be required to submit additional written clarifying information.

By signing this form, the undersigned Bidder certifies that the Certified Small Business or DVBE satisfies the Commercially Useful Function requirement, and will provide the role, services, and/or goods stated above.

Signature, Name and Title
Bidder Signature:
Bidder Printed/Typed Name and Title:

ATTACHMENT 10: TACPA PREFERENCE REQUEST FORMS

ATTACH THE TACPA PREFERENCE REQUEST FORMS AS ATTACHMENT 10: TACPA PREFERENCE REQUEST FORMS.

Bidders wishing to take advantage of this preference will need to review the website below and submit the appropriate response forms as ATTACHMENT 10: TACPA PREFERENCE REQUEST FORMS, with Final Proposal.

The required applications/forms are as follows:

- TACPA (Std. 830)
- Bidder's Summary of Contract Activities and Labor Hours (DGS/PD 525)
- Manufacturer Summary of Contract Activities and Labor Hours (DGS/PD 526).

https://www.dgs.ca.gov/PD/Services/Page-Content/Procurement-Division-Services-List-Folder/Request-a-Target-Area-Contract-Preference

ATTACHMENT 11: BIDDER QUALIFICATIONS FORM - INSTRUCTIONS

The Bidder must complete ATTACHMENT 12: BIDDER QUALIFICATIONS FORM with the qualifying project information being used to meet the minimum experience required for this project. A separate exhibit must be completed for each project used to meet the minimum mandatory requirements. *[INSTRUCTIONS: Agency/state entity must ensure that SECTION 7.3.4.1. BIDDER QUALIFICATIONS is consistent with this ATTACHMENT 12: BIDDER QUALIFICATIONS FORM must clearly specify the Bidder's minimum experience requirements needed to meet the objective of the project.]*

ATTACHMENT 12: BIDDER QUALIFICATIONS FORM will be used by California Public Utilities Commission to evaluate Bidder's qualifications. The Bidder must specify the required experience in the pertinent row for each requirement in ATTACHMENT 12: BIDDER QUALIFICATIONS FORM. Use additional forms as needed to complete each response. California Public Utilities Commission may contact references listed on ATTACHMENT 13: BIDDER REFERENCE FORM to verify the information provided by the Bidder. Any conflicting information may result in the bid being deemed non-responsive.

All experience must have occurred within <insert minimum number of years experience in alpha and numerical format> years prior to the solicitation release date, unless stated otherwise.

The Bidder must complete ATTACHMENT 12: BIDDER QUALIFICATIONS FORM in accordance with the instructions provided below. One attachment must be completed for each separate project used to meet the minimum mandatory experience requirements.

All dates must be in MM/DD/YYYY format.

Contact person for Bidder's references must not be an employee of *[Agency/state entity to insert specific unit in the Agency/state entity. This is intended to avoid the Bidder using an evaluation member as a reference which would be a conflict of interest)*. The reference and contact name(s) must be from the end user of the development project. References from another contractor or contracting company are not acceptable. Bidder's references may be contacted to verify information provided by the Bidder.

Box 1, Bidder: Provide the company name of the Bidder submitting the proposal.

Box 2, Project Name: Provide the name of the project.

Box 3, Company Name of the Bidder's reference. Identify the company for whom the project was completed.

Box 4, Contact name and contact information of the Bidder's reference. Identify the contact information from whom the project was completed. Enter the name, title, e-mail address, and phone number for the reference contact for the project. By submitting a proposal, the Bidder declares that the reference person identified is/was employed by the company identified in box 3. This reference must be the same person identified in the ATTACHMENT 13: BIDDER REFERENCE FORM.

Boxes 5 and 6, Start Date and End Date: Provide the start and end date that the Bidder worked on the cited project using MM/DD/YYYY format.

Box 7, Project Description: Provide a brief description of the nature of the Bidder's cited project. The description should include those elements that are similar to the State's project as described in the solicitation.

Box 8, Check the appropriate response, "Yes" or "No". If the "No" box is checked, time spent on that project will not count towards Bidder experience.

Box 9, Check the appropriate response, "Yes" or "No" or "On-going" *[INSTRUCTIONS: Agency/state entity to determine if only completed projects can be used for experience.]*

Box 10, Project Contract Amount: Provide the dollar amount in currency format of the project contract value.

Box 11, Instructions for documenting the years of experience gained from the project cited.

Note: It is the Bidder's responsibility to ensure that each minimum experience requirement is met in full and is addressed in the Bidder qualification forms in order for the State to determine compliance to the requirements. If the State cannot determine that the years of experience for each of the minimum experience requirements have been met, Bidder's proposal may be deemed non-responsive.

[instructions: Agency/state entity to define all the criteria elements to avoid any misinterpretation or assumptions of the qualification requirements.

EXAMPLE Definitions:]

1. If the required qualification indicates the experience must be on a large-scale and complete complex IT project, the Bidder and reference must use the following definitions:

   - Large-scale is defined as greater than 1000 users
   - A complex IT project is defined as a multi-segmented environment consisting of two or more disparate sites/locations.

2. Satisfactory – Bidder Qualification Reference Form rating is not lower than a "2".

ATTACHMENT 12: BIDDER QUALIFICATIONS FORM

The Bidder may use multiple projects to meet the total experience required for each mandatory experience and, if applicable, desirable experience. A separate form must be completed for each project cited.

QUALIFICATIONS FORM	
1	**Bidder:**
2	**Project Name:**
3	**Company Name of Bidder's reference:**
4	**Contact Name and Title, Email Address and Telephone Number of Bidder's referenc**
5	**Start Date (MM/DD/YYYY):**
6	**End Date (MM/DD/YYYY):**
7	**Project Description:**
8	**Was the Bidder that performed the work the Prime Contractor? Yes ___ No ___**
9	**Did the Bidder complete the project? Yes ☐ No ☐ On-going ☐** *(see line #6 for Cor completion date)*
10	**Project Contract Amount: $**

QUALIFICATIONS FORM				
11	For each mandatory experience and, if applicable, desirable experience listed below, chec the total years of experience was met on this referenced project; check “No” if none of the experience was met on this referenced project; or check “Partial” if fewer than the total yea experience was met on this referenced project. If partial or total experience was met (chec enter the years and/or months of “Experience gained on this referenced project” and descr Bidder’s role and responsibilities performed on the project in the “Description of services pr field.			
Number	**Classification**	**Mandatory Experience**	**Total Experience Required**	**Expe gained cited**
1	M	Five (5) years of experience performing System architecture and design on equivalent project(s) to the RPSD Project or on bigger projects than the RPSD Project	5 Years	Yes ☐ No ☐ Partial ☐ Yr.___
	Description of services provided:			
2	M	Five (5) years of Project Management experience managing Software development or implementation Projects of medium to large size using Software Development Life Cycle (SDLC) methodologies, and source code version control and build platforms.	5 Years	Yes ☐ No Partial Yr.___
	Description of services provided:			

QUALIFICATIONS FORM				
3	M	Three (3) years of experience with data migration activities (data analysis, data profiling, data cleanup, extract, convert/transform, migrate, and verify)	3 Years	Yes [No Partial Yr.___
	Description of services provided:			
4	M	Five (5) years of experience performing System design and development activities (Setting up development and test environments, conducting requirements and design workshops, requirements analysis, data modeling, PostgreSQL and Python/Django based web application design and development, back-end programming, configuration, API development, System interfaces development, and integration)	5 Years	Yes [No Partial Yr.___
	Description of services provided:			
5	M	Three (3) years of experience performing testing activities (creating test plans, test scripts, test data, unit testing, system testing, interface/ integration testing, providing UAT support, security testing, System recovery testing, defect analysis, and impact analysis for change requests)	3 Years	Yes [No Partial Yr.___
	Description of services provided:			

QUALIFICATIONS FORM				
6	M	Three (3) years of experience planning and developing training material (including case studies, labs/exercises, user guides and technical reference manuals), and conducting training classes or workshops	3 Years	Yes [ ] No Partial Yr.___
	Description of services provided:			
7	M	Three (3) years of experience performing deployment activities (transition planning, release planning, System deployment, post-implementation verification, and technical knowledge transfer)	3 Years	Yes [ ] No Partial Yr.___
	Description of services provided:			
8	M	Three (3) years of experience in AWS Cloud/ GovCloud platform performing resource provisioning, configuration, System environments [development, testing, training, pre-production, and production] setup, security architecture design and implementation, System deployment, System monitoring and control, and disaster recovery activities	3 Years	Yes [ ] No Partial Yr.___
	Description of services provided:			

QUALIFICATIONS FORM				
9	M	Two (2) years of experience providing System Maintenance & Operations (M&O) including implementing enhancements (change requests).	2 Years	Yes ☐ No Partial Yr.___
	Description of services provided:			

ATTACHMENT 13: BIDDER REFERENCE FORM

[INSTRUCTIONS: The text provided in the form only represents an example of the intent of this form.]

Bidder Instructions: Complete items 1-6 of this Attachment, BIDDER REFERENCE FORM. One (1) form must be used for each corresponding ATTACHMENT 12: BIDDER QUALIFICATIONS FORM submitted. The Bidder's reference contact must complete the remainder of this form. The reference information below must be consistent with the corresponding BIDDER QUALIFICATIONS FORM. Bidder must submit a copy of the completed BIDDER QUALIFICATIONS FORM and the corresponding BIDDER REFERENCE FORM, to references for completion.

Instructions to the Bidder's Reference: Using the rating scale in the "Reference Satisfaction Rating" field, rate your satisfaction with the Bidder who performed the services described on this Attachment BIDDER QUALIFICATIONS FORM. Sign and date this Attachment BIDDER REFERENCE FORM and return the form(s) to the Bidder.

BIDDER REFERENCE FORM	
1	**Bidder:**
2	**Project Name:**
3	**Company Name of Bidder's reference:**
4	**Contact Name and title, Email Address, and Telephone Number of Bidder's reference:**
5	**Bidder's involvement in this project (role and responsibilities):**

BIDDER REFERENCE FORM		
6	**Project Description:**	
	<u>Satisfaction Rating to be completed by the Bidder's reference:</u> Using the following scale: 0 = Unsatisfactory, 1 = Marginal, 2 = Satisfactory, 3 = Excellent, N/A = Not Applicable **Circle only one number for each question below.**	
7	How would you rate the Bidder's effectiveness at implementing or supporting a State, County or City government registry system?	**0 1 2**
8	Was the immunization registry system an instance of WIR?	**Yes No**
9	How would you rate the Bidder's effectiveness at transforming, consolidating, de-duplicating and integrating data from multiple sources into a single registry database?	**0 1 2**
10	How would you rate the Bidder's effectiveness at integrating application architectures within a central government data center?	**0 1 2**
11	How would you rate the Bidder's effectiveness at developing and/or implementing a statewide training program for users of a registry system?	**0 1 2**
12	How would you rate the Bidder's effectiveness at providing skilled staff?	**0 1 2**

BIDDER REFERENCE FORM		
13	How would you rate the Bidder's effectiveness at providing quality and timely responses to users' questions and concerns?	**0 1 2**
14	How would you rate the quality and professionalism of the Bidder's staff?	**0 1 2**
15	How would you rate the Bidder's effectiveness at managing project resources?	**0 1 2**
16	How would rate the Bidder's ability to manage project milestones, deliverables, and timelines?	**0 1 2**
17	How would you rate the Bidder's overall performance?	**0 1 2**
	Total Possible Points	**30**

By signing below, I declare that I have reviewed the information contained in ATTACHMENT 12: BIDDER QUALIFICATIONS FORM and that the information is true and correct.

Bidders Reference Information	
Reference Signature:	**Date:**

Bidders Reference Information
Printed Name:
Reference Title or role on the project:
Reference Email:
Reference Phone:

ATTACHMENT 14: KEY STAFF QUALIFICATIONS FORM – INSTRUCTIONS

The Bidder must complete ATTACHMENT 14.1 through 14.7 with the qualifying project information for each Key Staff used to meet the minimum experience required for this project. A separate Attachment must be completed for each project used to meet the minimum mandatory requirements for each key staff.

ATTACHMENT 14.1 through 14.7 will be used by the State to evaluate Key Staff's qualifications. The Bidder must specify the required experience in the pertinent row for each requirement in ATTACHMENT 14.1 through 14.7. Use additional forms as needed to complete each response. California Public Utilities Commission may contact references listed on ATTACHMENT 14.1 through 14.7 to verify the information provided by the Bidder. Any conflicting information may result in the bid being deemed non-responsive.

All dates must be in MM/DD/YYYY format.

All experience must have occurred within the last ten (10) years prior to the RFP release date.

Contact person for staff's references must not be an employee of *the CPUC Energy Division* The reference contact name(s) must be a representative of the company for which the project was developed. References from another contractor or contracting company are not acceptable.

Box 1, Bidder: Provide the company name of the Bidder submitting the proposal.

Box 2, Key Staff Name: Provide the name of the Bidder's proposed key staff for the RPSD Project.

Box 3, Staff's Referenced Project Name: Provide the project name for key staff's referenced project.

Box 4, Company Name of Key Staff's reference: Provide the company name of the Key Staff's reference.

Box 5, Contact Information of staff's reference: Identify the contact information for whom the project was completed. Enter the name, title, e-mail address, and phone number for the reference contact for the project. By submitting a proposal, the Bidder declares that the reference person identified is/was employed by the company identified in box 4. This reference must be the same person identified in the ATTACHMENT 14.1 through 14.7.

Provide the name of the individual from the company that received services from the Key Staff. Employee references are not acceptable.

Boxes 6 and 7, Staff Start Date and End Date: Provide the start and end dates the Key Staff worked on the cited project using MM/DD/YYYY format.

Box, 8, Project Description: Provide a brief description of the nature of the Bidder's cited project. The description should include those elements that are similar to the State's project as described in the solicitation.

Box 9, Project Contract Amount: Provide the dollar amount in currency format of the project contract value.

Box 10, Instructions for documenting the years of experience gained from the project cited.

Note: It is the Bidder's responsibility to ensure that each minimum experience requirement is met in full and addressed in the staff qualification forms in order for the State to determine compliance to the requirements. If the State cannot determine that the years of experience for each of the minimum experience requirements has been met, the Bidder's proposal may be deemed non-responsive.

Refer to SECTION 11. Key Staff Qualifications and Skills for the minimum and desirable qualifications for each Key Staff.

ATTACHMENT 14.1: Project Manager - QUALIFICATIONS FORM

The Bidder may use multiple projects to meet the total experience required for each mandatory experience and, if applicable, desirable experience. A separate form must be completed for each project cited.

QUALIFICATIONS FORM		
	1	**Bidder:**
	2	**Key Staff Name:**
	3	**Staff's Referenced Project Name:**
	4	**Company Name (of staff's reference):**
	5	**Contact Name, Email Address and Telephone Number (of Staff's Reference):**
	6	**Staff Start Date (MM/DD/YYYY):**
	7	**Staff End Date (MM/DD/YYYY):**
	8	**Project Description:**

QUALIFICATIONS FORM					
	9	**Project Contract Amount:**			
	10	For each mandatory experience and, if applicable, desirable experience listed below, cl "Yes" if the total years of experience was met on this referenced project; check "No" if n the experience was met on this referenced project; or check "Partial" if fewer than the to of the experience was met on this referenced project. If partial or total experience was (checked), enter the years and/or months of "Experience gained on this referenced proj describe the Staff's role and responsibilities performed on the project in the "Description services provided" field.			
Number		**Classification**	**Mandatory Experience**	**Total Experience Required**	**Experienc on this Proj**
11		M	Five (5) years of broad and extensive IT Project Management experience	5 Years	Yes ☐ No ☐ Partial ☐ Yr.___ M
		Description of services provided:			

QUALIFICATIONS FORM				
12	M	Two (2) years experience in the lead PM role, when multiple PMs are involved, or in the PM role, when only one IT PM is involved in managing the Project	2 Years	Yes ☐ No ☐ Partial ☐ Yr.___ M
	Description of services provided:			
13	M	The PM must have a minimum of five (5) years of experience in implementing web application development projects utilizing Python/Django web framework and AWS Cloud/AWS GovCloud infrastructure in a Technical Lead or PM role	5 Years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			
14	M	A Bachelors degree or an equivalent University degree	Attach a copy of the Degree	Yes ☐ No ☐
	Description of Degree provided:			
15	M	Project Management Institution (PMI) Project Management Professional (PMP) certification	Attach a copy of the Certificate	Yes ☐ No ☐
	Description of Certifications provided:			

QUALIFICATIONS FORM			
16	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with CPUC or related State agencies (California Energy Commission, California Air Resources Board, California Environmental Protection Agency)	Yes ☐ No ☐
	Description of services provided:		
17	DS	One (1) point for satisfactory experience and required knowledge in the following category: Knowledge of electric utility regulation in the State of California and RPS Program goals	Yes ☐ No ☐
	Description of services provided:		

ATTACHMENT 14.2: Project Manager - REFERENCE FORM

Bidder Instructions: Complete items 1-5 of this Attachment, STAFF REFRENCE FORM. One (1) form must be used for each corresponding Attachment, STAFF QUALIFICATIONS FORM submitted. The Bidder's key staff reference contact must complete the remainder of this form. The reference information below must be consistent with the corresponding Attachment STAFF QUALIFICATIONS FORM. Bidder must submit a copy of the completed STAFF QUALIFICATIONS FORM and the corresponding STAFF REFERENCE FORM, to the staff's reference(s) for completion.

Instructions to the staff's Reference: Using the rating scale in the "Reference Satisfaction Rating" field, rate your satisfaction with the staff that performed the services described on STAFF QUALIFICATIONS FORM. Sign and date this Attachment and return the form(s) to the Bidder.

REFERENCE FORM	
1	**Bidder:**
2	**Bidder's Key Staff Name:**
3	**Project Name:**
4	**Company Name of key staff's reference:**
5	**Contact Name and title, Email Address, and Telephone Number of staff's reference:**

REFERENCE FORM		
	Satisfaction Rating to be completed by the Staff's Reference: Using the following scale: 0 = Unsatisfactory, 1 = Marginal, 2 = Satisfactory, 3 = Excellent, N/A = Not Applicable **Circle only one response for each question below.**	
6	Can you confirm that the individual listed in #2 worked on the project listed in item #3?	**Yes No**
7	How would you rate the individual's overall performance?	**0 1 2 3**
8	How would you rate the individual's effectiveness in dealing with conflicting priorities?	**0 1 2 3**
9	How would you rate the individual's effectiveness at communicating (orally and in writing) with project members and stakeholders?	**0 1 2 3**
10	How would you rate the individuals effectiveness to work in a team setting?	**0 1 2 3**

By signing below, I declare that I have reviewed the information contained in STAFF QUALIFICATIONS FORM and that the information is true and correct.

DECLARATION OF REVIEW AND CORRECT INFORMATION	
Reference Signature:	**Date:**

DECLARATION OF REVIEW AND CORRECT INFORMATION
Printed Name:
Reference Title or role on the project:
Reference Email:
Reference Phone:

ATTACHMENT 14.3: Web Application Development Lead - QUALIFICATIONS FORM

The Bidder may use multiple projects to meet the total experience required for each mandatory experience and, if applicable, desirable experience. A separate form must be completed for each project cited.

QUALIFICATIONS FORM	
1	**Bidder:**
2	**Key Staff Name:**
3	**Staff's Referenced Project Name:**
4	**Company Name (of staff's reference):**
5	**Contact Name, Email Address and Telephone Number (of Staff's Reference):**
6	**Staff Start Date (MM/DD/YYYY):**
7	**Staff End Date (MM/DD/YYYY):**
8	**Project Description:**

QUALIFICATIONS FORM				
9	**Project Contract Amount:**			
10	For each mandatory experience and, if applicable, desirable experien below, check “Yes” if the total years of experience was met on this ref project; check “No” if none of the experience was met on this referenc or check “Partial” if fewer than the total years of the experience was m referenced project. If partial or total experience was met (checked), e years and/or months of “Experience gained on this referenced project describe the Staff’s role and responsibilities performed on the project “Description of services provided” field.			
Number	**Classification**	**Mandatory Experience**	**Total Experience Required**	**Ex gain cite**
11	M	Five (5) years of broad and extensive web application design and development experience	5 Years	Yes No Parti Yr.__
	Description of services provided:			

QUALIFICATIONS FORM				
12	M	Three (3) years of experience in implementing web application development projects utilizing Python/ Django web framework, and AWS Cloud/AWS GovCloud infrastructure	3 Years	Yes No Parti Yr.__
	Description of services provided:			
13	M	Five (5) years of working with relational databases	5 Years	Yes No Parti Yr.__
	Description of services provided:			
14	M	Three (3) years working with PostgreSQL database, designing, and developing interactive web based database applications	3 Years	Yes No Parti Yr.__
	Description of services provided:			

QUALIFICATIONS FORM				
15	M	One (1) year of work experience leading and supervising technical personnel, in the design, development, testing, deployment, and maintenance of web based interactive database applications running on cloud infrastructure	1 Year	Yes No Parti Yr.__
	Description of services provided:			
16	M	A bachelor's degree or higher in any of the following areas: computer science, engineering, business, physics, or mathematics	Attach a copy of the Degree	Yes No
	Description of Degree:			
17	M	Certified Web Developer or Solution Architect	Attach a copy of the Certificate	Yes No
	Description of certification:			
18	M	Certified Python Programmer	Attach a copy of the Certificate	Yes No
	Description of certification:			

QUALIFICATIONS FORM			
19	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with CPUC or related State agencies (California Energy Commission, California Air Resources Board, California Environmental Protection Agency)	Yes No
	Description of experience provided:		
20	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with PostGIS	Yes No
	Description of experience provided:		
21	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with Tableau	Yes No
	Description of experience provided:		

QUALIFICATIONS FORM			
22	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with mapping APIs	Yes No
	Description of experience provided:		
23	DS	One (1) point for satisfactory experience and required knowledge in the following category: Knowledge of electric utility regulation in the State of California and RPS Program goals	Yes No
	Description of experience provided:		

ATTACHMENT 14.4: Web Application Development Lead - REFERENCE FORM

Bidder Instructions: Complete items 1-5 of this Attachment, STAFF REFRENCE FORM. One (1) form must be used for each corresponding Attachment, STAFF QUALIFICATIONS FORM submitted. The Bidder's key staff reference contact must complete the remainder of this form. The reference information below must be consistent with the corresponding Attachment STAFF QUALIFICATIONS FORM. Bidder must submit a copy of the completed STAFF QUALIFICATIONS FORM and the corresponding STAFF REFERENCE FORM, to the staff's reference(s) for completion.

Instructions to the staff's Reference: Using the rating scale in the "Reference Satisfaction Rating" field, rate your satisfaction with the staff that performed the services described on STAFF QUALIFICATIONS FORM. Sign and date this Attachment and return the form(s) to the Bidder.

REFERENCE FORM	
1	**Bidder:**
2	**Bidder's Key Staff Name:**
3	**Project Name:**
4	**Company Name of Key Staff's reference:**
5	**Contact Name and title, Email Address, and Telephone Number of staff's reference:**

REFERENCE FORM		
	Satisfaction Rating to be completed by the Staff's Reference: Using the following scale: 0 = Unsatisfactory, 1 = Marginal, 2 = Satisfactory, 3 = Excellent, N/A = Not Applicable **Circle only one response for each question below.**	
6	Can you confirm that the individual list in #2 worked on the project listed in item #3?	**Yes No**
7	How would you rate the individual's overall performance?	**0 1 2 3**
8	How would you rate the individual's effectiveness in dealing with conflicting priorities?	**0 1 2 3**
9	How would you rate the individual's effectiveness at communicating (orally and in writing) with project members and stakeholders?	**0 1 2 3**
10	How would you rate the individuals effectiveness to work in a team setting?	**0 1 2 3**

By signing below, I declare that I have reviewed the information contained in STAFF QUALIFICATIONS FORM and that the information is true and correct.

DECLARATION OF REVIEW AND CORRECT INFORMATION	
Reference Signature:	**Date:**

DECLARATION OF REVIEW AND CORRECT INFORMATION
Printed Name:
Reference Title or role on the project:
Reference Email:
Reference Phone:

ATTACHMENT 14.5: Back-End Lead - QUALIFICATIONS FORM

The Bidder may use multiple projects to meet the total experience required for each mandatory experience and, if applicable, desirable experience. A separate form must be completed for each project cited.

QUALIFICATIONS FORM	
1	**Bidder:**
2	**Key Staff Name:**
3	**Staff's Referenced Project Name:**
4	**Company Name (of staff's reference):**
5	**Contact Name, Email Address and Telephone Number (of Staff's Reference):**
6	**Staff Start Date (MM/DD/YYYY):**
7	**Staff End Date (MM/DD/YYYY):**
8	**Project Description:**

QUALIFICATIONS FORM				
9	**Project Contract Amount:**			
10	For each mandatory experience and, if applicable, desirable experience listed below, chec the total years of experience was met on this referenced project; check “No” if none of the experience was met on this referenced project; or check “Partial” if fewer than the total yea experience was met on this referenced project. If partial or total experience was met (chec enter the years and/or months of “Experience gained on this referenced project” and descr Staff’s role and responsibilities performed on the project in the “Description of services pro field.			
Number	**Classification**	**Mandatory Experience**	**Total Experience Required**	**Experienc on this cite**
11	M	Five (5) years of experience as a Technical/Back-End Lead responsible for all Back-End or Server-side activities in Custom Software implementation projects involving SDLC processes, relational databases, and n-tier architectures	5 Years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			

QUALIFICATIONS FORM				
12	M	Two (2) years of experience using and administering GitHub, a cloud based source code version control and build platform	2 years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			
13	M	Three (3) years of experience in AWS Cloud/AWS GovCloud platform and must have performed architecture design, resource provisioning, resource configuration or environment setup, web applications deployment, disaster recovery, operations, platform upgrades, and systems monitoring & control	3 Years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			
14	M	Three (3) years of experience in Python/Django scripting or web application development	3 Years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo

QUALIFICATIONS FORM				
	Description of services provided:			
15	M	Three (3) years of experience in Linux utilities and server-side programming and scripting	3 Years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo.
	Description of services provided:			
16	M	Three (3) years of experience in PostgreSQL database administration, version upgrades, performance tuning, data modeling, schema design, capacity planning, database programming, and data migration	3 Years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo.
	Description of services provided:			
17	M	One (1) year of work experience leading and supervising technical personnel, in the implementation and maintenance of web based interactive database applications running on cloud infrastructure.	1 Year	Yes ☐ No ☐ Partial ☐ Yr.___ Mo.
	Description of services provided:			

QUALIFICATIONS FORM				
18	M	A bachelor's degree or higher in any of the following areas: computer science, engineering, business, physics, or mathematics	Attach a copy of the Degree	Yes ☐ No ☐
	Description of Degree:			
19	M	PostgreSQL Database Administrator (DBA) certification	Attach a copy of the Certificate	Yes ☐ No ☐
	Description of Certifications provided:			
20	M	An active AWS Professional Solution Architect certification or AWS Solutions Architect - Associate certification throughout the Contract. If the Certification expires during the Contract, the Back-End Lead must re-certify within one (1) month of expiration	Attach a copy of the Certificate	Yes ☐ No ☐
	Description of Certifications provided:			
21	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with CPUC or related State agencies (California Energy Commission, California Air Resources Board, California Environmental Protection Agency)		Yes ☐ No ☐
	Description of experience provided:			

QUALIFICATIONS FORM			
22	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with PostGIS	Yes ☐ No ☐
	Description of experience provided:		
23	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with Tableau	Yes ☐ No ☐
	Description of experience provided:		
24	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with mapping APIs	Yes ☐ No ☐
	Description of experience provided:		
25	DS	One (1) point for satisfactory experience and required knowledge in the following category: Knowledge of electric utility regulation in the State of California and RPS Program goals	Yes ☐ No ☐
	Description of experience provided:		

ATTACHMENT 14.6: Back-End Lead - REFERENCE FORM

Bidder Instructions: Complete items 1-5 of this Attachment, STAFF REFRENCE FORM. One (1) form must be used for each corresponding Attachment, STAFF QUALIFICATIONS FORM submitted. The Bidder's key staff reference contact must complete the remainder of this form. The reference information below must be consistent with the corresponding Attachment STAFF QUALIFICATIONS FORM. Bidder must submit a copy of the completed STAFF QUALIFICATIONS FORM and the corresponding STAFF REFERENCE FORM, to the staff's reference(s) for completion.

Instructions to the staff's Reference: Using the rating scale in the "Reference Satisfaction Rating" field, rate your satisfaction with the staff that performed the services described on STAFF QUALIFICATIONS FORM. Sign and date this Attachment and return the form(s) to the Bidder.

REFERENCE FORM	
1	**Bidder:**
2	**Bidder's Key Staff Name:**
3	**Project Name:**
4	**Company Name of key staff's reference:**
5	**Contact Name and title, Email Address, and Telephone Number of staff's reference:**

REFERENCE FORM		
	Satisfaction Rating to be completed by the Staff's Reference: Using the following scale: 0 = Unsatisfactory, 1 = Marginal, 2 = Satisfactory, 3 = Excellent, N/A = Not Applicable **Circle only one response for each question below.**	
6	Can you confirm that the individual listed in #2 worked on the project as listed in item #3?	**Yes No**
7	How would you rate the individual's overall performance?	**0 1 2 3**
8	How would you rate the individual's effectiveness in dealing with conflicting priorities?	**0 1 2 3**
9	How would you rate the individual's effectiveness at communicating (orally and in writing) with project members and stakeholders?	**0 1 2 3**
10	How would you rate the individuals effectiveness to work in a team setting?	**0 1 2 3**

By signing below, I declare that I have reviewed the information contained in STAFF QUALIFICATIONS FORM and that the information is true and correct.

DECLARATION OF REVIEW AND CORRECT INFORMATION	
Reference Signature:	**Date:**

DECLARATION OF REVIEW AND CORRECT INFORMATION
Printed Name:
Reference Title or role on the project:
Reference Email:
Reference Phone:

ATTACHMENT 14.7: Testing/QA Lead - QUALIFICATIONS FORM

The Bidder may use multiple projects to meet the total experience required for each mandatory experience and, if applicable, desirable experience. A separate form must be completed for each project cited.

QUALIFICATIONS FORM	
1	**Bidder:**
2	**Key Staff Name:**
3	**Staff's Referenced Project Name:**
4	**Company Name (of staff's reference):**
5	**Contact Name, Email Address and Telephone Number (of Staff's Reference):**
6	**Staff Start Date (MM/DD/YYYY):**
7	**Staff End Date (MM/DD/YYYY):**
8	**Project Description:**

QUALIFICATIONS FORM				
9	**Project Contract Amount:**			
10	For each mandatory experience and, if applicable, desirable experience listed below, chec the total years of experience was met on this referenced project; check “No” if none of the experience was met on this referenced project; or check “Partial” if fewer than the total yea experience was met on this referenced project. If partial or total experience was met (chec enter the years and/or months of “Experience gained on this referenced project” and descr Staff’s role and responsibilities performed on the project in the “Description of services pro field.			
Number	**Classification**	**Mandatory Experience**	**Total Experience Required**	**Experienc on this cite**
11	M	Five (5) years of experience as a Testing/QA Lead in custom web application software development Projects and/or implementing web based modified-off-the-shelf software (MOTS) projects	5 Years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			

QUALIFICATIONS FORM				
12	M	Three (3) years of work experience in creating System Test Plans and Integration Test Plans for web based interactive database applications	3 Years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			
13	M	Three (3) years of demonstrated experience in testing Web Applications developed using Python/Django web framework, PostgreSQL database, and AWS Cloud/GovCloud platforms	3 Years	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			
14	M	One (1) year of work experience leading and supervising System testing staff, in System testing web based interactive database applications running on AWS Cloud/ AWS GovCloud infrastructure	1 Year	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			

QUALIFICATIONS FORM				
15	M	One (1) year of experience with GitHub source code version control and build platform for code management	1 Year	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			
16	M	One (1) year of experience in developing test scripts for automated testing	1 Year	Yes ☐ No ☐ Partial ☐ Yr.___ Mo
	Description of services provided:			
17	M	A bachelor's degree or higher in any of the following areas: computer science, engineering, business, physics or mathematics.	Attach a copy of the Degree	Yes ☐ No ☐
	Description of Degree:			

QUALIFICATIONS FORM			
18	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience working with CPUC or related State agencies (California Energy Commission, California Air Resources Board, California Environmental Protection Agency)	Yes ☐ No ☐
	Description of experience provided:		
19	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience testing web applications that have PostGIS and geospatial data components	Yes ☐ No ☐
	Description of experience provided:		
20	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience testing web applications that have Tableau integrations	Yes ☐ No ☐
	Description of experience provided:		

QUALIFICATIONS FORM			
21	DS	One (1) point for satisfactory experience and required knowledge in the following category: Experience testing web applications that have integration with mapping APIs	Yes ☐ No ☐
	Description of experience provided:		
22	DS	One (1) point for satisfactory experience and required knowledge in the following category: Knowledge of electric utility regulation in the State of California and RPS Program goals	Yes ☐ No ☐
	Description of experience provided:		

ATTACHMENT 14.8: Testing/QA Lead - REFERENCE FORM

Bidder Instructions: Complete items 1-5 of this Attachment, STAFF REFRENCE FORM. One (1) form must be used for each corresponding Attachment, STAFF QUALIFICATIONS FORM submitted. The Bidder's key staff reference contact must complete the remainder of this form. The reference information below must be consistent with the corresponding Attachment STAFF QUALIFICATIONS FORM. Bidder must submit a copy of the completed STAFF QUALIFICATIONS FORM and the corresponding STAFF REFERENCE FORM, to the staff's reference(s) for completion.

Instructions to the staff's Reference: Using the rating scale in the "Reference Satisfaction Rating" field, rate your satisfaction with the staff that performed the services described on STAFF QUALIFICATIONS FORM. Sign and date this Attachment and return the form(s) to the Bidder.

REFERENCE FORM	
1	**Bidder:**
2	**Bidder's Key Staff Name:**
3	**Project Name:**
4	**Company Name of key staff's reference:**
5	**Contact Name and title, Email Address, and Telephone Number of staff's reference:**

REFERENCE FORM		
	Satisfaction Rating to be completed by the Staff's Reference: Using the following scale: 0 = Unsatisfactory, 1 = Marginal, 2 = Satisfactory, 3 = Excellent, N/A = Not Applicable **Circle only one response for each question below.**	
6	Can you confirm that the individual listed in #2 worked on the project listed in item #3?	**Yes No**
7	How would you rate the individual's overall performance?	**0 1 2 3**
8	How would you rate the individual's effectiveness in dealing with conflicting priorities?	**0 1 2 3**
9	How would rate the individual's effectiveness at communicating (orally and in writing) with project members and stakeholders?	**0 1 2 3**
10	How would you rate the individuals effectiveness to work in a team setting?	**0 1 2 3**

By signing below, I declare that I have reviewed the information contained in STAFF QUALIFICATIONS FORM and that the information is true and correct.

DECLARATION OF REVIEW AND CORRECT INFORMATION	
Reference Signature:	**Date:**

DECLARATION OF REVIEW AND CORRECT INFORMATION
Printed Name:
Reference Title or role on the project:
Reference Email:
Reference Phone:

ATTACHMENT 15: TEMPLATE FOR QUESTION SUBMITTAL

[INSTRUCTIONS: This attachment provides the format for a Bidder to submit questions regarding this solicitation and is not required to be submitted with proposal responses.]

The Bidder is required to use this form when submitting questions to the Procurement Official listed in Section PROCUREMENT OFFICIAL. Instructions are as follows:

Name of Bidder – Provide the name of the bidding firm

Contact Person – Provide the name of the person to contact if the State needs clarification about the question.

Contact Email and Phone Number – Provide the email and phone number (including area code) for the listed contact person.

Q # – Sequentially number each question, always starting at one (1) for each submission.

Section/Document(s) – Identify the section or document the request pertains to, such as “Section SALES TAX.”

Page # – Identify the page number of the section/document name or title the question pertains to.

Question – Write the question in this column.

Expand or reduce the number of rows to accommodate the number of questions.

Table-1 Question Submittal Form

SOLICITATION Bidder Question Form			
Name of Bidder:			
Contact Person:			
Contact Email and Phone Number:			
Q #	**Section/ Document(s)**	**Page #**	**Question**
1			
2			
3			
4			

ATTACHMENT 16: SOLICITATION SUBMISSION CHECKLIST

(This attachment is not required to be submitted with your solicitation response.)

Has your firm submitted the following Exhibits?

☐ ATTACHMENT 2: INTENT TO BID

☐ ATTACHMENT 3: CONFIDENTIALITY STATEMENT

Does your Final Proposal follow the format specified in Section 6?

☐ Labeled as identified in Section 6.

☐ No cost data provided in any volumes, except in Volume 2.

Is your Final Proposal provided in the following order, as identified in Section 6?

Volume 1: Response to Administrative Requirements, Technical Requirements and Literature

☐ Cover letter with original signature and information as specified in SECTION 3.11. COVER LETTER (M)

☐ ATTACHMENT 4: RESPONSE TO ADMINISTRATIVE REQUIREMENTS

☐ ATTACHMENT 5: BIDDER DECLARATION GSPD 05-105

☐ ATTACHMENT 7: DVBE DECLARATIONS

☐ ATTACHMENT 6: WORKERS' COMPENSATION CERTIFICATION

☐ ATTACHMENT 8: BIDDING PREFERENCES AND INCENTIVES

☐ ATTACHMENT 9: COMMERCIALLY USEFUL FUNCTION (CUF) CERTIFICATION

☐ ATTACHMENT 10: TACPA PREFERENCE REQUEST FORMS

☐ ATTACHMENT 12: BIDDER QUALIFICATIONS FORM and ATTACHMENT 13: BIDDER REFERENCE FORM

☐ ATTACHMENT 14.1 through 14.7 and ATTACHMENT 14.2 through 14.8

☐ EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS

☐ EXHIBIT B: DELIVERABLES TABLE

☐ ATTACHMENT 17: NARRATIVE RESPONSE

Volume 2: Cost

☐ EXHIBIT C: COST WORKSHEETS

The State makes no warranty that the checklist is a full and comprehensive listing of every requirement specified in the solicitation. Checking off the items on the checklist does not establish your firm's intent nor does it constitute responsiveness to the requirements. The checklist is only a tool to assist participating Bidders in compiling the Final Proposal. The Bidder is encouraged to carefully read the entire solicitation. The need to verify all documentation and responses prior to the submission of the Final Proposal cannot be over emphasized.

ATTACHMENT 17: NARRATIVE RESPONSE

The Bidder must submit their Narrative Response as ATTACHMENT 17: NARRATIVE RESPONSE of their response to the RFP. See SECTION 7.3.5.3. NARRATIVE RESPONSE REQUIREMENTS (MS) for specifications.

EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS

EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS

Posted as a separate document on the CaleProcure website which should be downloaded and completed as described below and provided to the State as indicated in SECTION 6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS.

The Bidder must complete and submit as part of its Final Proposal, EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS. The Bidder must indicate compliance and confirmation to each of the requirements by marking “Yes” or “No” in the column labeled “Contractor Agrees to provide the Requirement Yes/ No”. A blank or “No” answer in this column will be deemed non-responsive and may be the basis for rejection of the Bidder’s proposal.

The following provides a description of each column and the instructions for completing EXHIBIT A: FUNCTIONAL, NON-FUNCTIONAL, AND TRANSITION REQUIREMENTS:

Column A, Category Name: For Reference Only. This column lists an assigned subject grouping for the requirement during the final requirements gathering phase.

Column B, Sub-Category: For Reference Only. This column lists the general business or functionality sub-group.

Column C, Business Process(es): For Reference Only. This column lists the general business process group.

Column D, Requirement Number: For Reference Only. This column lists an assigned requirement number and starts with the top level index that refers to the number assigned to Category Name.

Column E, Proposed Requirement Description: For Reference Only. This column lists the description of the requirement.

Column F, Requirement Type: For Reference Only. This column lists whether the requirement is Functional, Non-Functional or Transitional.

Column G, Priority: For Reference Only. Lists the priority of the requirement, either Mandatory (M) or Mandatory Optional (MO).

Column H, Stability: For Reference Only. This column lists how stable the requirement is. High stability means the Business put a high certainty on the requirement. Requirement with Medium stability can be revisited with the Business.

Column I, Impacted User Category: For Reference Only. This column lists the group of users that will be impacted by the Requirement: All Users, Retail Sellers, CPUC Staff, RPS Admin, Public, Web Portal Users, or a chosen combination.

Column J, Statement of Work (SOW) Deliverable Reference: For Reference Only. This column lists the SOW Deliverable(s) Number(s) for traceability purpose as those deliverables have a work component to address the deliverable (Design, Development, Testing, Documentation, or Configuration/Environment).

Column K, Contractor Agrees to Provide Requirement (Yes/No): Bidder shall complete this column. Each row must be marked either "Yes" or "No". A blank or "No" answer will be deemed non-responsive and may be the basis for rejection of the Bidder’s proposal. The Requirements whose priority is marked "Mandatory Optional" may be implemented if CPUC decides to implement them.

EXHIBIT B: DELIVERABLES TABLE

1. DELIVERABLES TABLE

The Bidder must complete and submit as part of Final Proposal, EXHIBIT B: DELIVERABLES TABLE below. The Bidder must indicate compliance and confirmation with each of the deliverables in the table below which are part of implementing the detailed solution requirements described in SECTION 4.2.1. FUNCTIONAL AND NON FUNCTIONAL REQUIREMENTS (M). By marking “Yes,” the Bidder affirms that it understands the requirement and agrees to comply with the requirement. Marking “No” to any of the mandatory deliverables and sub-deliverables listed in the Bidder's proposal will result in the proposal being deemed non-responsive and may be the basis for rejection of the Bidder's proposal.

The following provides a description of each column and the responsibility of the Bidder for completing the EXHIBIT B: DELIVERABLES TABLE.

- Column 1, RPSD Project Deliverables: For reference only. This column lists the high level deliverables. Refer to SOW SECTION 15. Project (Contractor) Tasks and Deliverable Requirements for details.
- Column 2, Contractor Agrees to Provide the Deliverable: Bidder must complete this column. Bidder shall mark "Yes" for all deliverables the Bidder agrees to. Bidder shall mark "No" for all deliverables the Bidder does not agree to. A "No" answer will be deemed non-responsive and may be the basis for rejection of the Bidder's proposal.

The Bidder is reminded that in order to be considered responsive and responsible to the requirements, the Bidder must provide enough detail in the Final Proposal in order for the State to evaluate the Bidder's ability to meet the requirement. Refer to SECTION 7. EVALUATION for details on how the requirement will be scored as a part of the overall evaluation.

RPSD Project Deliverables	Contractor Agrees to Provide the deliverable
Deliverable 1 - Contractor Work Plan, and RPSD Project Schedule	Yes ☐ No ☐
Deliverable 2- Validated RPSD Detailed Solution Requirements and Business Process Flows	Yes ☐ No ☐
Deliverable 3- RPSD Development Environment Setup and Documentation	Yes ☐ No ☐
Deliverable 4- RPS Database Detailed Design	Yes ☐ No ☐
Deliverable 5- Web Portal Detailed Technical Designs	Yes ☐ No ☐
Deliverable 6- Web Portal Unit Test Plans	Yes ☐ No ☐

RPSD Project Deliverables	Contractor Agrees to Provide the deliverable
Deliverable 7- Web Portal System Test Plans	Yes ☐ No ☐
Deliverable 8- Public Website Detailed Technical Designs	Yes ☐ No ☐
Deliverable 9- Public Website Unit System Test Plans	Yes ☐ No ☐
Deliverable 10- Public Website System Test Plans	Yes ☐ No ☐
Deliverable 11 - Web Portal	Yes ☐ No ☐
Deliverable 12- Public Website	Yes ☐ No ☐

RPSD Project Deliverables	Contractor Agrees to Provide the deliverable
Deliverable 13- System Transition and Knowledge Transfer Documentation	Yes ☐ No ☐
Deliverable 14- RPSD Warranty	Yes ☐ No ☐
Deliverable 15 - RPSD System M&O	Yes ☐ No ☐

EXHIBIT C: COST WORKSHEETS

1. COST WORKSHEETS

Posted as a separate document on the CaleProcure website which should be downloaded and completed in accordance with SECTION 5.2. COST WORKBOOK INSTRUCTIONS provided to the State as indicated in SECTION 6. PROPOSAL/BID FORMAT AND SUBMISSION REQUIREMENTS. Cost worksheets shall be submitted with the Bidder's Final Proposal as described in SECTION 6.4.2. VOLUME 2: COST, in the Volume 2: Cost folder.

EXHIBIT D: DELIVERABLE EXPECTATION DOCUMENT (DED)

IT Procurement and Project Management Services

Deliverables Expectation Document (DED)

CPUC Contact #_____– RPSD

The project schedule will be the master schedule for all deliverables.

DED #____: RPSD (Deliverable #____)

Deliverable #	Deliverable Name	DED Tasks

APPROVALS

This DED is subject to the terms and conditions of the Contract #_____, Statement of Work.

Contractor Name

Printed Name:

Signature:_____

Date:_____

CPUC Project Manager

Printed Name:

Signature:_____

Date:_____

EXHIBIT E: DELIVERABLE ACCEPTANCE DOCUMENT (DAD)

California Public Utilities Commission

IT Procurement and Project Management Services

Deliverable Acceptance Document

Contractor Name	
CPUC Contract Number	
Contract Name	
Deliverables Contract	
CPUC Division/Branch	
Month work completed	

Deliverable #	Deliverable Name	Deliverable Details	Project Resource	Hourly Rate	Total Hours	Total Cost
1						**$**
2						**$**
					Grand Total	**$**
					Less 10% Retention	**$**
					Invoice Total	**$**

The CPUC accepts the deliverables and tasks completed for work performed for this Deliverable Acceptance Document. Attached to the invoice will be any documents or artifacts invoiced for this period if applicable. *The invoice will be rejected by the CPUC IT Contract Administrator if the documents or artifacts are not attached.*

Agreed and Accepted by:

CPUC Business PM	**Contractor Name:**
Printed Name:	Printed Name:
Signature:	Signature:
Date:	Date:

EXHIBIT F: KEY STAFF CHANGE ORDER REQUEST FORM

EXHIBIT H

KEY STAFF CHANGE ORDER REQUEST FORM

Contractor Name: Contract Number:
Proposed Start Date: or upon approval by the CPUC Project Manager, whichever occurs later.
Reason for Change:

Description of Change: Current Key Staff: (Name, classification, and hourly rate) Proposed Key Staff: (Name including phone number and email address)	
Proposed Key Staff Classification: (must be equal or better than current classification)	Proposed Hourly Rate: (must be less than or equal to current classification)

EXHIBIT G: KEY STAFF QUALIFICATIONS FORM

Key Staff Job Title:

The Contractor may use multiple projects to meet the total experience required for each mandatory experience and, if applicable, desirable experience. A separate form must be completed for each project cited. The applicable form will be provided by the CPUC, upon request.

	QUALIFICATIONS FORM
1	**Contractor:**
2	**Key Staff Name:**
3	**Staff's Referenced Project Name:**
4	**Company Name (of staff's reference):**
5	**Contact Name, Email Address and Telephone Number (of Staff's Reference):**
6	**Staff Start Date(MM/DD/YYYY):**
7	**Staff End Date(MM/DD/YYYY):**
8	**Project Description:**

	QUALIFICATIONS FORM			
9	**Project Contract Amount:**			
10	For each mandatory experience and, if applicable, desirable experience listed below, chec the total years of experience was met on this referenced project; check “No” if none of the experience was met on this referenced project; or check “Partial” if fewer than the total yea the experience was met on this referenced project. If partial or total experience was met(checked), enter the years and/or months of “Experience gained on thi referenced project” and describe the Staff’s role and responsibilities performed on the project in the “Description of services or experience provi field.			
Number	**Classification**	**Mandatory Experience**	**Total Experience Required**	**Experienc on t cited P**
11				Yes☐ No☐ Partial ☐ Yr.____Mo.
	Description of services or experience provided:			
12			**Attach Certificate**	Yes ☐ No

	Description of degree or equivalent year-for-year work:

EXHIBIT H: KEY STAFF QUALIFICATIONS REFERENCE FORM

Complete items 1-5 of this Key Staff Reference Form. One (1) form must be used for each corresponding Exhibit I: Key Staff Qualification Form submitted for each project cited. The key staff reference contact must complete the remainder of this form. The reference information below must be consistent with the corresponding Exhibit I. Contractor must submit a copy of the completed Exhibit I and the corresponding Exhibit J, to the staff's reference(s) for completion.

Instructions to the staff's reference: Using the rating scale in the "Reference Satisfaction Rating" field, rate your satisfaction with the staff that performed the services described on Exhibit I. Sign and date this Exhibit J and return the form(s) to the Contractor.

	REFERENCE FORM
1	**Contractor:**
2	**Contractor's Key Staff Name:**
3	**Project Name:**
4	**Company Name of Key Staff's reference:**
5	**Contact Name and Title, Email Address, and Telephone Number of staff's reference:**

6	**Satisfaction Rating to be completed by the Staff's Reference:** Using the following scale: 0 = Unsatisfactory, 1 = Marginal, 2 = Satisfactory, 3 = Excellent **Mark only one response for each question below.**	
7	Can you confirm that the individual worked on the project as listed in item# 2?	**Yes No**
8	How would you rate the individual's overall performance?	**0 1 2 3**
9	How would you rate the individual's effectiveness at communicating (orally and in writing) with project member sand stakeholders?	**0 1 2 3**
10	How would you rate the individual's effectiveness in dealing with conflicting priorities?	**0 1 2 3**
11	How would you rate the individual's effectiveness to work in a team setting?	**0 1 2 3**

By signing below, I declare that I have reviewed the information contained in Exhibit I and that the information is true and correct.

DECLARATION	
Reference Signature:	**Date:**

Printed Name:
Reference Title or role on the project:
Reference Email:
Reference Phone:

EXHIBIT I: WORK AUTHORIZATION (WA)

IT Procurement and Project Management Services

CPUC Contract #_____ – RPSD

The project schedule will be the master schedule for all deliverables. A copy of the fully executed WA must be attached to each invoice.

1. **INTRODUCTION - Scope**
   The purpose for this Work Authorization is to implement…

2. **SCHEDULE**
   Completion dates for Work Authorizations # are outlined in Section 3 – Task Description.

3. **TASK DESCRIPTION –Summary of Work and Estimates**
   The following reflect the work requested for this Work Authorization.

WA#	Task #	Task Name	Task Details	Completion Date

Work Authorization Cost Estimates

WA#	Task #	Project Resource Name	Project Role	Hourly Rate	Estimated Hours	Estimated Cost
				$		$

WA#	Task #	Project Resource Name	Project Role	Hourly Rate	Estimated Hours	Estimated Cost
Totals						$

4. **RESOURCES REQUIRED**

CPUC agrees to provide staff from the San Francisco and Sacramento Offices. The resources assigned to these WA's will be:

Contractor (insert Contractor name) will assign (insert classification) to complete the tasks required for this WA. The resources assigned to WA No. will be:

5. **WORK AUTHORIZATION ACCEPTANCE CRITERIA**

Task # / Name	Acceptance Criteria

6. **COMPLETION DATE**

- Tasks must be completed before the completion date on the WA.
- If the completion date will need to be extended the CPUC Program Supervisor must prepare an addendum to the WA prior to the completion date.
- Once the completion date passes the WA is considered expired and a new WA must be generated.

7. **APPROVALS**

This WA is subject to the terms and conditions of the Contract #_____, Statement of Work.

Agreed and Accepted by:

Contractor Name

Printed Name:

Signature:_____

Date:_____

CPUC Program Supervisor

Printed Name:

Signature:_____

Date:_____

EXHIBIT J: GLOSSARY OF TERMS

Term/Acronym	Definition
AB	Assembly Bill.
AB1890	AB 1890: Assembly Bill 1890 which was signed into law on September 23, 1996 as Chapter 854 of the Statutes of 1996. AB 1890 provides the legislative guidance for restructuring of the electric industry in California.
Agency/State entity	Includes every state office, officer, department, division, bureau, board, and commission, including Constitutional Officers. “State entity” does not include the University of California, California State University, the State Compensation Insurance Fund, the Legislature, or the Legislative Data Center in the Legislative Counsel Bureau.
Aggregator	Any marketer, broker, public agency, city, county, or special district that combines the loads of multiple end-use customers in facilitating the sale and purchase of electric energy, transmission, and other services on behalf of these customers.
Attester	Attester is a role in the RPSD System assigned to RPSD System users belonging to the Retail Seller organizations. Each Retail Seller organization may assign a Manager/Officer as the Attesting Authority for RPS Data. The assigned individual's user id is granted this Role so the user can attest the submitted RPS data. (In the current RPSD System, web portal access is limited to California's three large IOUs. In the new RPSD System, the data submission capability is expanded to multiple organizations drawn from IOUs, SMJUs, CCAs, and ESPs collectively called Retail Sellers, In the current RPSD System, there is no Attester role. Attester role is a new requirement).
Reviewer	Reviewer role provides access to data. The Reviewer can query and download data/data files, but not upload or submit the data files. In the current RPSD System, the Reviewer role is prefixed with the respective organization's short name.

Submitter	Submitter role provides the ability to upload data files, download error files, download export files created by the RPSD Web Portal, and Submit data files that are found to be error free by the RPSD Web Portal (such files are ready for submission). Submitter can also Query and download historical data. If the same user has Submitter role and Attester role, then the same user can attest the RPS data. The submission process in the new RPSD System will be a multi-step process: Upload a data file, Submit the data file when it is found to be error free by the RPSD Web Portal, provide confidentiality declaration, and attest the submitted RPS data.
Addendum	An addition to a main document, proposal, contract, or an agreement. Addendums may exist for any legal document such as a Solicitation, Offer, or Contract for providing additional information. Addendum does not modify the original document.
Alternative Flows	The term is applicable to business process flows that are exceptions to the normal business process flows.
Amendment	An Amendment is intended to modify the original document, contract, proposal, or agreement. Contracts will have amendments when the terms (scope, cost, timeline. Staffing, or any other terms and conditions) of the Contract need to be modified for any reason during the course of the Contract.
AMI	Amazon Machine Image. A Linux version provided by AWS is referred as AWS Linux AMI.
API	Application Programming/Programmer Interface. A prepackaged code that allows an external program interact with a System or Service using a pre-published interface. API calls accept input for an API/function/service, and provide output from the API/function/service.
AWS	Amazon Web Services is a Cloud platform for System, storage, and web services infrastructure offered as services and charged based on usage. Reference https://aws.amazon,com
AWS Cloud	AWS Cloud is a Cloud based IT Infrastructure platform provided by the AWS to customers who subscribe for it.
AWS CloudEndure	An AWS service that provides infrastructure and tools for disaster recovery using remote backup, remote setup, and activation of an alternative system environment when required. AWS CloudEndure must be configured for disaster recovery. Reference https://aws.amazon.com/cloudendure-disasterrecovery/

AWS GovCloud	A service designed to address specific regulatory and compliance requirements of US government agencies, contractors, educational institutions, and other U.S. customers that run sensitive workloads in the cloud. Beyond the assurance programs applicable to all AWS Regions, the AWS GovCloud (US) Regions allow customers to adhere to U.S. International Traffic in Arms Regulations (ITAR), Federal Risk and Authorization Management Program (FedRAMP), and Department of Defense (DoD) Cloud Computing Security Requirements Guide (SRG) Impact Levels 2, 4, and 5. Reference https://aws.amazon.com/govcloud-us/
AWS S3 / AWS S3 Storage	AWS Simple Storage Service is a data storage service offered by AWS for organizing and storing data files. These may include database or system backups, code, or data files in various formats. AWS S3 provides version control when version control is enabled on an AWS S3 storage bucket. Reference https://aws.amazon.com/s3/
Balancing Authority	Balancing authority means the responsible entity that integrates resource plans ahead of time, maintains load-interchange generation balance within a balancing authority area, and supports interconnection frequency in real time.
Balancing Authority Area	Balancing authority area means the collection of generation, transmission, and loads within the metered boundaries of the area within which the balancing authority maintains the electrical load-resource balance.
Bidder's Library	A set of documents that are provided to potential bidders via a SharePoint document repository to further evaluate the RFP. These documents include the current system description, proposed environment, detailed solution requirements, project management plans, and data consolidation strategy.
Broker	An entity that arranges the sale and purchase of electric energy, transmission, and other services between buyers and sellers, but does not take title to any of the power sold.
BA	Business Analyst - An individual who gathers, documents, and analyzes business requirements by holding discussions with stakeholders. The Business Analyst works as an intermediary between SMEs, System designers, and developers.
Business Requirements	Higher-level statement of the goals, objectives, or needs of the Agency/state entity. Business requirements describe the reasons why a project has been initiated, the objective that the project will achieve, and the metrics that will be used to measure its success. Business requirements describe the needs of the Agency/state entity as a whole, not the groups or stakeholders within it.
BVES	Bear Valley Electric Services is an SMJU within California.

CAISO	California Independent System Operator. ISO was constituted to ensure efficient and reliable operation of the electrical transmission grid. Existing law states the intent of the Legislature to provide for the evolution of the ISO into a regional organization to promote the development of regional electricity transmission markets in the western states. Senate Bill 350 enacted into law in October 2015 allows ISO to be transformed into a regional organization, subject to approvals.
CBA	California Balancing Authority is a balancing authority with control over a balancing authority area primarily located in this state and operating for retail sellers and local publicly owned electric utilities and includes the Independent System Operator (ISO) and a local publicly owned electric utility operating a transmission grid that is not under the operational control of the ISO. A California balancing authority is responsible for the operation of the transmission grid within its metered boundaries which is not limited by the political boundaries of the State of California.
CCA	Community Choice Aggregator. Community Choice Aggregation (CCA) is a program that permits cities, counties, and other authorized entities, called Community Choice Aggregators, to purchase and/or generate electricity for residents and businesses located within the boundaries of their jurisdiction. CCAs are a category of electricity retail sellers who submit RPS data to CPUC. Example include: Marin Clean Energy, Central Coast Community Energy (formally Monterey Bay Community Power)
CCB	Change Control Board
CDT	California Department of Technology has statewide responsibility for IT Project proposal review, decision making and implementation oversight. Ensures the states' IT projects meet the standards and guidelines and comply with State Policy. Reviews and approves Project Proposals through Project Approval Lifecycle (PAL) process. Provides Project Oversight during implementation by deputing an Independent Project Oversight Consultant (IPOC). Reference: https://www.cdt.ca.gov

CEC	California Energy Commission - as the state's primary energy policy and planning agency, the California Energy Commission is committed to reducing energy costs and environmental impacts of energy use - such as greenhouse gas emissions - while ensuring a safe, resilient, and reliable supply of energy. URL: http://energy.ca.gov The CEC prepares the Integrated Energy Policy Report (IEPR) and collaborates with state and federal agencies, utilities, and other stakeholders to develop and implement state energy policies.
CloudFormation	CloudFormation is an AWS Service that lets the customer create a template of resources before hand before provisioning and configuring the resources. The AWS provisioning process will take the CloudFormation template as an input and provisions and configures the required resources. Reference: https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/Welcome.html
COD	Commercial Online Date
Commercial Off-The-Shelf (COTS) Software	A computer hardware or software product that is ready-made for specific uses and available for sale to the general public. COTS products are designed to be installed without requiring custom development. For example, Microsoft Office is a COTS product that is a packaged software solution for businesses and individuals. The set of rules for COTS is defined by the Federal Acquisition Regulation (FAR).
Content Server	Official CPUC document repository. It is a cloud based software and storage service. Final CEEDM Project documents containing requirements, project management plans, system designs, test plans, project status reports, issues, CRs, user guides, training material, DEDs, and DADs will be saved in Content Server.
Contractor	A software development or implementation vendor organization to be selected through a competitive bidding process which will implement the RPSD System.
CPU	Central Processing Unit - an electronic component in a computing, communication, or data processing device.
CPUC	California Public Utilities Commission. Oversees and regulates Public Utilities in the State of California in Transportation, Energy (includes Electricity), Water, and Communications to ensure safety, rate control and availability of Public Utilities. Reference: https://www.cpuc.ca.gov

CPUC Budget Officer	Provides inputs to projects about personnel, facilities, and equipment costs in preparing Project Proposals. Provides input to Budget Change Proposals. Ensures projects have sources of funds identified before approving proposals.
CPUC CIO	CPUC Executive in-Charge of IT. Works with CPUC Divisions, prioritizes IT projects and allocates IT staff to meet commitments; reviews progress and responds to escalations. Provides input on technology framework and IT standards; participates in Project Steering Committee meetings.
CPUC Energy Division	CPUC Energy Division is a Division within CPUC which provides regulatory oversight and program tracking for California Energy (Gas and Electric) Utilities. The CPUC Energy Division has joint Responsibility with CEC and CAISO for SB350 (2016), SB697 (2015) implementation. Has joint responsibility to implement State's Renewable Energy procurement goals and reporting requirements. Has authority to control utility rates/pricing and review energy generation and transmission projects. Interfaces and shares data with Environmental and Permitting Agencies. Responsible to identify a diverse and balanced portfolio of resources needed to ensure a reliable electricity supply that provides optimal integration of renewable energy in a cost-effective manner. Provides periodic and on-demand reports to the Legislature and Office of the Governor on the Status and Progress of Renewable Energy Goals. Reviews and responds to public queries under California Public Records Act. Maintains a database to keep track of RPS goals, milestones, and RPS project information.
CPUC Enterprise Architect	Responsible for Technology Roadmap for CPUC and defining standards for IT project implementations. Reviews and approves Project Proposals, participates in Steering Committee meetings and ensures projects adhere to state recommended Standards and Best Practices. Ensures projects implement Technology and Data Recovery, and Business Continuity Plans.
CPUC ISO/ CPUC Information Security Officer	CPUC ISO is an IT Manager. Defines CPUC Information Security Policy. Works with CDT Security team in defining data classification schemes. Participates in project reviews and approves project proposals. Responsible to ensure Information Security Compliance by CPUC projects and individuals. Manages and leads a team IT Security specialists within CPUC.

CPUC - IT Procurement	Works with other CPUC stakeholders, CDT, Budget Office to facilitate contracting / procurement of a) IT Project Implementation Vendor; b) Project oversight consultant from CDT; c) Independent Verification and Validation Vendor and d) any external consultants for staff augmentation (Business Analyst; Subject Matter Consultant; GIS Specialist). Reviews Project Implementation milestones, invoices, and facilitates payments to vendors. Ensures contract compliance by vendors and CPUC Staff.
CPUC - IT PMO	CPUC IT Project Management Office (PMO). PMO works with other stakeholders to implement the RPSDB IT Project within schedule and budget with the required Quality and Standards. Organizes Steering Committee meetings and Change Control Board (CCB) meetings to help make decisions in a timely manner. Participates in CCB meetings which makes decisions or defers decisions to Project Director, Sponsor, and Steering Committee as appropriate.
CPUC Project Sponsor	Refer to Executive Sponsor.
CR	Change Request. CRs are initiated by the business to define a new requirement that needs to be addressed either during a project implementation or after implementation. The new requirement may have been necessitated by a new legislative requirement, CPUC policy, change in business process, a gap in requirements defined earlier. CRs will go through CR definition, CR impact assessment, CR review and approval processes before they are prioritized for implementation. One (1) or more CRs will be bundled for release after their development, testing, and acceptance.
Critical Defect	Critical Defect - A defect that may result in the failure of the system, subsystem, software (program or module) within the system, or data loss/ corruption.
CSS	Cascading Style Sheets. CSS is a web standard to define and render user interface for web applications.
Custom Solution	Typically, computer software developed for a specific customer to accommodate the customer's particular requirements, preferences, and expectations.
DAD	Deliverable Acceptance Document: A formal document that is submitted along with a deliverable to document the deliverable attributes, personnel who worked on delivering, duration, deliverable acceptance criteria, and the cost for the deliverable. A DAD acceptance by the Customer is a pre-requisite for invoicing the Customer.

Data Conversion	Converting data from one format to another or from one data type to another data type.
Data Definition Language (DDL)	A term used in data modeling and database schema definition. DDL for relational databases is part of a broader language called Structured Query Language (SQL). DDL allows database objects to be defined with any necessary constraints. DDL will have commands/constructs like CREATE DATABASE, CREATE TABLE, ALTER TABLE, DROP TABLE, CREATE VIEW, ALTER VIEW, DROP VIEW, CREATE INDEX, ALTER INDEX, DROP INDEX.
Data Encryption	The encryption process encodes your data (referred to as plaintext) into ciphertext. Unlike plaintext, ciphertext can't be used by people or computers unless and until the ciphertext is decrypted. Decryption requires an encryption key that only authorized users have. Encryption helps ensure that only authorized recipients can decrypt your content. Reference: https://docs.microsoft.com/en-us/microsoft-365/compliance/encryption?view=o365-worldwide
Data File Submission	A business capability that lets RPSD Web Portal users from retail seller organizations to submit RPS data files, that are found to be error free by the RPSD System, to CPUC for review and for compliance with RPS data submission requirements.
Data File Upload	A business capability that lets RPSD Web Portal users from retail seller organizations to upload RPS data files, and have the System validate the files.
Data Manipulation Language/DML	A term used to define SQL language constructs that are used for updating data in relational databases. DML allows database objects to be updated using INSERT, UPDATE, and DELETE statements. INSERT command will add a row in the target database table. UPDATE command is used to update specific data items (intersection of rows and columns) in a given database table. DELETE command is used to delete specific rows from a given database table. INSERT, UPDATE, and DELETE commands may also be used to effect multiple rows in a given table at a time.
Data Migration	Migrating or moving data from one System to another
Data Model	An Organization of data into interrelated data objects. Please see E-R Model.
Data Security	Data Security is concerned with classifying data into different levels of confidentiality (non-confidential, confidential, highly-confidential/ sensitive) and measures the impact on an organization when data security is compromised via unauthorized access to confidential data, unauthorized modification of data, and unavailability of data for any length of time due to System outage.

Data Visualization	A business or system capability to provide data in an easily understandable format such as Tables, Graphs, Charts, and Maps.
DDL	Data Definition Language (part of SQL Standard) for defining database objects.
Decision Log	A document that maintains historical decisions for later review and for audit purposes. Decision log may contain the following attributes: Business Area, System Component, Decision Made, Decision Date, Decision Taken By, Impacted Stakeholders, Communication Method, or Inputs for the Decision.
DED	Deliverable Expectation Document: A formal document that provides a description of a deliverable. The Contractor in collaboration with the CPUC Business PM will develop a DED, which will present an outline of expectations of the tasks associated with each deliverable and completion dates. Each DED must map to a single deliverable, and a fully approved DED shall be completed before any work can commence for each deliverable.
Defect	A system feature which does not conform to the system requirements. Alternatively, a defect is a flaw in a component or system that can cause the component or system to fail to perform its required function. A defect, if encountered during execution, may cause a failure of the component or system. For the purposes of the RPSD System, defects are categorized as "Critical," "Major," and "Minor," based on the impact of a defect. Critical Defect - A defect that may result in the failure of the system, subsystem, software (program or module) within the system, or data loss/ corruption Major Defect - A defect that may result in the failure of the system, subsystem, software (program or module) within the system, or data loss/ corruption; however, a work-around may exist to mitigate the issue Minor Defect - Minor defects cause the system to produce incorrect, incomplete or inconsistent results, or impairs the system's usability. Minor defects do not cause data loss/ corruption. Minor defects do not cause a system failure. A work-around may exist to mitigate the issue.
Defect Fix	Please refer to Error Correction.
Deliverable	A work product delivered as part of a contractual obligation. A software product, program, script, documentation, training material, training session, set of review recommendations are examples of work products or deliverables.

Deliverables Table	A list of deliverables, their descriptions, and the timeframe in which they must be completed.
Deployment Plan	System production release management plan is called deployment plan. It provides a list of tasks, sequence of tasks, resources assigned to accomplish the tasks, and planned start and end dates for the tasks. The deployment will consist of AWS resource provisioning, environment creation per the approved system architecture, applying the database schema and configuration data, migration of files, and legacy data from legacy databases, packaging and deploying the web application; performing validation and sanity checks. It also has a sub plan to back out, fix issues, and redo the deployment in the event of defects or failure.
Development	Refers to one of the phases in Software Development Life Cycle (SDLC) when software development takes place in the specified environment for a target system architecture based on system requirements, detailed designs, and test plans.
Development Environment	An environment created for system design, development, and unit testing activities. A shared environment used by multiple designers and developers. Installing common features which impacts all the developers is done in a coordinated manner while giving freedom to individual developers to work on their unit of work. Version control system maintains a trunk (main) and branches for managing source code versions.
DGS	Department of General Services. A California State agency that has administrative oversight authority on agencies in matters not covered by CDT.
DGSTATS	Refers to Distributed Generation Statistics website with that name funded by California Solar Initiative (CSI) program. https://www.californiadgstats.com
Direct Access Transaction	Direct Access Transaction is a contract between any one or more electrical generators, marketers, or brokers of electric power and one or more retail customers providing for the purchase and sale of electric power or any ancillary services.
Disaster Recovery	Ability to recover from a catastrophic system failure. A disaster could be human made or due to a natural event such as an earthquake, flood, or such. Systems are configured so the system can be deployed at an alternative site by using remote backup storage and system configuration. Please also refer to AWS CloudEndure which provides a disaster recovery architecture and tool to recover in case of a disaster.

Django Web Framework	A website development framework based on Python. Reference: https://www.djangoproject.com provides the following introduction: "Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel. It's free and open source."
DML	Data Manipulation Language (part of SQL Standard) for updating data in database objects. It has SQL constructs for adding rows (INSERT), updating rows and columns (UPDATE), and deleting rows (DELETE).
Docker	A software platform or utility for software application portability across different server environments. Docker allows applications to be packages as Docker containers which are portable for example between Windows and Linux servers. Reference: https://www.docker.com provides the following introduction: "Docker makes development efficient and predictable. Docker takes away repetitive, mundane configuration tasks and is used throughout the development lifecycle for fast, easy and portable application development - desktop and cloud. Docker's comprehensive end to end platform includes UIs, CLIs, APIs and security that are engineered to work together across the entire application delivery lifecycle."
DR	Disaster Recovery
Dynamic SQL	SQL generated by the system at runtime based on inputs provided as opposed to static SQL bound by a predefined query.
EB CLI	Elastic Beanstalk Command Line Interface. Allows user interaction with AWS server resources using specific commands provided by the EB CLI.
EC2	Elastic Compute Cloud. EC2 refers to AWS Servers.
ED Data warehouse	CPUC Energy Division Data Warehouse is a System that collects data from various operational data sources and stores it in a data warehouse for review, data analytics, and decision support report generation.

Elastic Beanstalk	It is an AWS Service for provisioning AWS server resources. https://aws.amazon.com/elasticbeanstalk/ provides the following introduction to this service: "AWS Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services developed with Java, .NET, PHP, Node.js, Python, Ruby, Go, and Docker on familiar servers such as Apache, Nginx, Passenger, and IIS."
Electrical Corporation	A corporation that owns or operates electricity transmission facilities
Emergency Fix	A process by which an unexpected outage of the RPSD System or any component thereof is restored to operation while simultaneously mitigating one or more system defects identified as the cause of the outage.
Energy Division	A Division within CPUC that has oversight for Energy Utilities (Electric and Gas utilities). Please see CPUC Energy Division. Also, refer to CPUC Energy Division.
Energy Division Staff	CPUC Staff who work in the Energy Division.
Enhancement	An enhancement will involve expanding the system functionality to include a new requirement that was not thought of during the requirements finalization. Please also refer to CR or Change Request.
Entry Criteria	Defines a set of conditions that must exist to begin a process
ERD/Entity Relationship Model	Entity Relationship Diagram/Model is a schematic or a diagram that allows visualization of the interrelationships between Business Entities. A preferred way to model real world objects to comprehend relationships between them. E-R model will be input to data model. E-R Model allows relationships between objects defined in one-to-one, one-to-many, many-to-many, many-to-one relationships. The model shows the primary key, foreign key, and the cardinality of the relationship and the related entity. All the attributes of an entity need not be shown in an E-R model.
ERM	Energy Resource Modeling

Error Correction	A process for detecting and mitigating system errors including input, processing, or outputs. Error correction is also called defect fix that may require a change in the system functionality to address a defect or error. The error may lie in the input, the process, or the output. Based on the correction required, an input may be redefined, the process (user interaction, data validation, workflow or calculations, data conversion) may be altered, or the output (updated data, output file, or workflow message) may be redefined. Error correction may require changes to data model, input, output formats, or code.
Error File	Generated by the RPSD Web Portal when an uploaded file has validation errors.
ESC	Executive Steering Committee
ESP	An Electric Service Provider is a non-utility entity that offers "Direct Access" electric service to customers located within the service territory of an Investor Owned Utility. ESPs are required to register with the California Public Utilities Commission. Electricity Service Provider. ESPs are a category of electricity retail sellers and submit RPS data to CPUC.
eTag Generator Control Area (GCA / GBA)	Generator Control Area (aka Generator Balancing Area) on the e-Tag: For PCC 1 claims, this must be the Generator Control Area or the balancing authority where the RPS renewable energy resource is located.
eTag Generator Name	Generator Name as listed on e-Tag: name of the source facility generating the RPS eligible electricity as it appears on the corresponding e-Tag. For the first compliance period only, if there is another source listed, the retail seller must provide a written explanation as to why this is the case and how staff can determine that the amount or percentage of the amount on the e-Tag is attributable to the specific RPS facility. Staff will evaluate the explanation to determine if the claim or a portion of the claim can be classified as PCC 1. For the second compliance period and forward, the source on the e-Tag must be the RPS-certified facility for which the PCC 1 claims are made.
eTag Identification number	e-Tag code
eTag listed Load Point	Load as listed on e-Tag: “Load” point that is registered with NERC as the “Sink Point” (aka Sink, Last Point of Delivery, POD) and listed on the e-Tag. In order to count as PCC 1 the “Load” point must be within a CBA.

eTag Load Control Area (LCA)	Load Control Area (LCA) as listed on e-Tag: The LCA must represent generation scheduled into a CBA. LCAs that are not CBAs or are not located in CBAs should not be included. Generation amounts that are associated with LCAs that are not in a CBA, or cannot be located within a CBA, will not be classified as PCC 1.
eTag RPS ID / Importing Entity	Importing Entity: Input the assigned RPS ID for the Purchasing/ Selling Entities (PSE) as it appears in the “Miscellaneous Token Field RPS_ID” field. Miscellaneous Token Field RPS_ID: Input up to 10 Miscellaneous Token Field RPS_ID values associated with the physical delivery path of RPS procurement delivered into a CBA.
eTag Summary Report	electronic Tag Summary Report. Retail sellers must submit hourly e-Tag summary report to determine the proper PCC classification of RECs generated.
eTag Total MWh	Total MWh on e-Tag for the time period: the total MWh (up to four decimal places) of RPS eligible electricity scheduled into a CBA.
Executive Sponsor	CPUC RPSDB Project's Executive Sponsor is also Energy Division's Director. The Sponsor/Executive Sponsor provides high level objectives/ direction, funding, and resources for the Project and helps overcome any impediments for the Project. Participates in Project Steering Committee meetings; Ensures Energy Division staff are allocated to the project to a) provide subject matter expertise, b) test and ensure quality of the system, c) monitor the implementation, d) represent the business stakeholders, both CPUC and Utilities, in defining system requirements and e) provide input to creating user guides.
Executive Steering Committee	A project management team role. Executive Steering Committee comprises of project executive sponsor, CIO, and other stakeholders who review agenda items and take decisions for the project when the agenda items exceed the project director's authority for approving a budget, scope, or schedule variance from the previously approved baselines. (Project director can approve a cumulative variance of five (5) percent whereas the executive sponsor or the Steering Committee may approve up to ten (10) percent cumulative variance. More than ten (10) percent cumulative variance must be referred to CDT for review and approval via a Special Project Report (SPR).
Exit Criteria	Defines a set of conditions that must exist to end a process

Export File	A file generated by the RPSD Web Portal when the uploaded RPS Monthly File, RPD Offer File, or RPS Annual File (to change to semi-annual file) is found to have no errors. When there are errors, the export file would be an empty file. The Input data files may have multiple worksheets in them. But the export file only has one worksheet, and it collects the required data from all the different worksheets and places it in the export file for updating the database. So, the export file data structure is closely related to the RPS database table structures.
FEDRAMP	Federal Risk Assessment and Management Program.
File Transfer Protocol (FTP)	A network file transfer standard. Also, a windows and Linux/Unix utility, built using file transfer protocol, to transfer files from one device to another over a connected network. Another variation is SFTP which is a Secure FTP.
Final Proposal	A final offer made in response to a request to perform a contract for work/labor or to supply goods at a specified price. Also known as a Final Bid.
FIPS	Federal Information Processing Standards. Reference: https://www.nist.gov/itl/fips-general-information The National Institute of Standards and Technology (NIST) develops FIPS publications when required by statute and/or there are compelling federal government requirements for cybersecurity. FIPS publications are issued by NIST after approval by the Secretary of Commerce, pursuant to the Section 5131 of the Information Technology Management Reform Act of 1996 (Public Law 104-106), and the Computer Security Act of 1987 (Public Law 100-235).
Firewall	A Firewall is a network security device that monitors and filters incoming and outgoing network traffic based on an organization's previously established security policies. At its most basic, a firewall is essentially the barrier that sits between a private internal network and the public Internet. Reference: https://www.checkpoint.com/cyber-hub/network-security/what-is-firewall
FTP	File Transfer Protocol is a network file transfer standard. Also, a windows and Linux/Unix utility, built using file transfer protocol, to transfer files from one device to another over a connected network. Another variation is SFTP which is a Secure FTP.

Functional Requirements	Functional requirements represent the business objectives, needs and outcomes of all stakeholders. They should be organized and presented in context of and with a baseline business process/ workflow that they describe. They provide a description of what an enabling solution should provide and specifies essential details of a solution for stakeholders as a means to express and manage expectations. They describe actions and operations that the solution must be able to perform. They can describe services, reactions, and behaviors of the solution. They also describe information the solution will manage. The requirements should be expressed in business terms and should not include any technical references. The requirement should identify “what” is required to meet the business objective, not “how” the requirement will be implemented.
Generators	Generators are those entities which will design, construct, own, operate, and maintain generation assets to supply energy and ancillary services to the competitive market.
Geographical Data Format	A data format in which location, and the given geometrical shape are represented in digital data.
GIF	Graphic Information File.
GIS	Geospatial/Geographical Information System that provides location based data and intelligence.
GIS Shape file	Please refer to Shape File.
GitHub	A source code version control software/cloud based platform or service for collaborative software development over the Internet. Also referred to as a version control and build platform. GitHub is a Microsoft subsidiary. Reference: https://www.GitHub.com
Go Live	The event when the Production system goes into effect. After a production deployment, the stakeholders will review the deployment verification and validation report to decide to go live. When issues are discovered that inhibit going live, the go live event is postponed until a later date, so the issues will be corrected and the system redeployed. The term Go Live applies to the initial production system deployment. Subsequent increments are referred to as incremental deployments, major releases, or minor releases.

High Charts	A software developer/offering by that name. Used to create data visualization (Charts and Graphs) in web pages. Highcharts are used by the dgstats website: https://californiadgstats.ca.gov Reference: https://www.highcharts.com/ The Highcharts library comes with all the tools you need to create reliable and secure data visualizations. Built on JavaScript and TypeScript, all our charting libraries work with any back-end database or server stack. We offer wrappers for the most popular programming languages (.Net, PHP, Python, R, Java) as well as iOS and Android, and frameworks like Angular, Vue, and React.
Hourly Meter and eTag reconciliation Report	A Compliance Reporting document used to report generation from projects outside of CA seeking PCC 1 status and that utilize a Dynamic Schedule Agreement and/or are scheduled on an Hourly or Sub-Hourly basis. It is not needed for projects that use a Pseudo Tie, are directly connected to a California Balancing Authority, or are not seeking PCC 1 status. Used in the annual compliance reporting process.
HTML	Hyper Text Markup Language.
HTTPS	Hyper Text Transport Protocol Secure.
I/O	Input/Output.
IaaS	Infrastructure as a Service. Infrastructure refers to computer, networking hardware, storage, and software. A Service Provider such as AWS provides IaaS so the customer does not have to purchase hardware, storage or software and instead pay a service fee for the usage (based on time, capacity, and quantities).
IEC	International Electrotechnical Commission. A Standards Body located in Switzerland. Please refer to: https://www.iec.ch/homepage
Immaterial Deviation	A deviation can be accepted by the State when it is determined to be of such a minor concern that it carries little or no importance, and by accepting it, it doesn't provide the bidder with any material advantage over other bidders. Example: A bidder referenced the wrong page in their supporting technical literature. The bidder directed the evaluator to page 4 and the correct page should have been page 5.
Impact Assessment/IA	A process and a document that analyzes the impact of a change on an existing system, System artifact, security, or operations.
Incident Log	A file that keeps a log of System Incidents that are reported to a Help Desk/Contact Center or an Operations Team. Used for documenting Incidents, status changes, resolutions, and for analysis and reporting purposes.

Information Security	Information Security is concerned about protecting an Organization's Information from unauthorized access, unauthorized modification, and ensuring the information is easily available when needed by the stakeholders. Information Security is guaranteed by creating Information Security Policies, Protocols, and Controls, implementing them, training the users, and conducting audits. Please also refer to ISO, CPUC ISO, and Data Security.
Information System Recovery Plan	Refer to ISRP.
Information Technology	A subject matter specialization in designing, developing and maintaining Information Systems. Also, includes the technology associated with implementing information systems. The term IT may also be used to refer to a department or division within an organization and will encompass systems, infrastructure (hardware, software, and network), staff, policies, and management.
Input	Input consists of a set of predefined parameters or a formatted data file. Inputs are required when invoking a function that needs inputs.
IOU	Investor Owned Utility as opposed to Publicly Owned Utility. IOUs are a category of electricity retail sellers. IOUs include the three large IOUs in California (PG&E, SCE, and SDG&E) which supply three quarters of the electricity in California, and Small and Multi Jurisdictional Utilities (SMJUs). IOUs work with CPUC in implementing energy programs (generating or procuring renewable energy, electricity transmission), and reports to CPUC about RPS compliance, RPS procurement, and the current status of generation and transmission projects. IOUs have assigned goals to procure specific percentages of electricity from eligible Renewable Energy sources by calendar year: 33 percent by December 31, 2020, 40 percent by December 31, 2024, 45 percent by December 31, 2027, and 50 percent by December 31, 2030.
IP	Internet Protocol
IPOC	Independent Project Oversight Consultant. A CDT representative will be assigned as a CDT IPOC on State projects. IPOC will provide a monthly report to the project sponsor and CIO about the health of the project throughout the implementation ending in a project closure report.
IPP	Independent Power Producer.

ISO	Information Security Officer
ISO/IEC	International Organization for Standardization/International Electrotechnical Commission
ISRP	Information System Recovery Plan. The ISRP discusses the system recovery in case of a failure or disaster. It will contain an action plan, whom to contact for reporting, whom to contact for getting approvals for initiating a system recovery, step by step recovery instructions, and system verification procedures. All the critical CPUC systems will undergo system recovery testing once a year.
Issue Log	Please refer to Incident Log. Issues may occur during development also. In that sense, Incident Log relates to Production System whereas Issue Log can be part of any activity (development, testing, training, production). It may also be referred to as Defects Log. Issue is a problem that already occurred whereas Risk is a potential problem.
IT Business Analyst	A Role in an IT Organization for gathering, documenting, and analyzing business requirements. IT Business Analyst also reviews test plans, test results, conducts UAT, reviews user guides/manual and provides feedback.
IT PM	IT Project Manager. Responsible for documenting Project Scope, Schedule, Budget, Task assignment, Task Tracking, and Reporting. Prepares project planning documents such as project management plans, reviews requirements, designs, and other System artifacts. Prepares status reports, schedules and conducts project meetings, provides agenda for CCB and Steering Committee meetings. Also, responsible for project communication to the team whereas Business PM is responsible for stakeholder communication.
ITC	Investment Tax Credit
IV	Imperial Valley
IV&V Vendor	Independent Verification & Validation Vendor. A Vendor who reviews the Project processes, operational procedures, environments, work plans, and deliverables to provide independent assessment to the CPUC Business PM about the health of the project. The IV&V Vendor submits reports aligning with specific milestones and specific deliverables that are defined in the IV&V Vendor's statement of work.
JAD/JAD Sessions	Joint Application Design/Development sessions where all the stakeholders (Business, IT, Contractor, and the Oversight teams) come together to define business application requirements and create application designs or finalize inputs for application design.

JavaScript	A Client Side Scripting Language. Supported by Web browsers as web browsers have an inbuilt JavaScript interpreter that interprets/ executes JavaScript commands.
JIRA	A software development, testing collaboration, and tracking tool from Atlassian. Reference https://www.atlassian.com/software/jira
JPEG	JPEG is an acronym for Joint Photographic Experts Group, which is the committee that invented the file format. Many photos and bitmap images are saved in .jpeg format in order to reduce the size of the files. JPEG is a lossy file format, which means that image quality is affected if you compress the image too much. Reference: https://fileinfo.com/
JPG	A JPG file is a raster image saved in the JPEG format, commonly used to store digital photographs and graphics created by image-editing software. JPEG features lossy compression that can significantly reduce the size of an image without much degradation and supports up to 16,777,216 colors. Reference: https://fileinfo.com/
JQuery	Language used to define database queries.
JRP	Joint Reliability Plan
JSON	JavaScript Object Notation. A standard for defining data structures for data exchange.
KWh	Kilowatt-hour
LCBF	Least-Cost Best-Fit
LCR	Local Capacity Requirement
Lead SME	Lead Subject Matter Expert. In RPSD Project, Lead SME refers to RPS Lead SME who is from Energy Division.
Legislature	In the context of this project, the Legislature monitors the progress of RPS goals, milestones, geographical distribution, procurement costs and generation costs. For this purpose the Legislature requires CPUC Energy Division to submit reports. Legislature receives periodic and on-demand reports from CPUC based on data maintained in the RPS database.
Lessons Learned Report	A document containing the stakeholder feedback at the end of an activity that looks back on the activity and identifies what could have been done better.
Linux	Linux is a multi-user Server Operating System that is similar to Unix Operating System. Linux may also be used as a Client Operating System on Personal Computers.
Locally Owned Utilities	Refer to Publicly Owned Utilities.

Long Term Procurement	Any procurement that spans ten (10) or more years of service is a long term procurement. Long term procurement ensures service for the Customer and demand for the supplier. In Long term procurement, the rates are defined at the time of procurement. The rates may remain static, inflation adjusted annually, or subject to rate increases annually by a pre-defined percentage.
LSE	Load Serving Entity (Electricity Supplier)
LTPP	Long-Term Procurement Plan
Marketer	Any entity that buys electric energy, transmission, and other services from traditional utilities and other suppliers, and then resells those services at wholesale or to an end-use customer.
M&O	Maintenance & Operations. M&O is a responsibility for maintaining and operating a system or a sub-system after it is fully developed and deployed in the Production environment. M&O may involve regular operations of the system as well as implementing enhancements or CRs.
MACRS	Modified Accelerated Cost Recovery System
Maintenance	Modification of a software product after delivery to correct defects, to improve performance, other attributes (i.e., user experience, productivity, accessibility), or to adapt the product to a modified environment.
Maintenance & Operations	A responsibility for maintaining and operating a system after it is fully developed and deployed in the Production environment. M&O may involve regular operations of the system as well as implementing enhancements or CRs.
Major Defect	Major Defect - A defect that may result in the failure of the system, subsystem, software (program or module) within the system, or data loss/ corruption; however, a work-around may exist to mitigate the issue.
Map	A plot of a geographical area with boundaries and reference points such as milestones.
Map Services	Services that provide on demand maps, either base maps on which custom data is overlaid, or create maps based on input data. Map Services will convert digital data to a graphic format for data visualization. Map services can depict the map over a base map such as a City map, topographical map, infrastructure installations, or state or county boundaries.
MAT	Market Adjusted Tariff. Examples include BioMAT, ReMAT

Matched REC Generating Unit ID	Matched REC Generating Unit ID is a WREGIS generating unit ID, if available, to which the e-Tag is being matched. If the e-Tag is being matched to more than one WREGIS generating unit or more than one RPS-certified facility, use one record for each unit or facility.
Material Deviation	A deviation in the bid response that cannot be accepted by the State because it is not in substantial accord with the solicitation requirements, provides an advantage to one bidder over other bidders, or has a potentially significant effect on the delivery, quantity, or quality of items bid, amount paid to the Contractor, or on the cost to the State. Material deviations cannot be waived. Example: The solicitation required a system that would serve 500 users and the bidder only offered a system that would serve 250 users.
Milestone	A Milestone is a marker that denotes crossing of a predefined stage in the project. A goal post or reference point that tells when a summary task is accomplished or how far away it is. A milestone may align with the completion of a project stage in a project schedule.
Minor Defect	Minor Defect - Minor defects cause the system to produce incorrect, incomplete or inconsistent results, or impairs the system's usability. Minor defects do not cause data loss/ corruption. Minor defects do not cause a system failure. A work-around may exist to mitigate the issue.
M&O Manual	Refer to Operations Manual
Modified Off-The-Shelf (MOTS) Software	Typically, a COTS product with source code made available to the purchaser to allow for modifications. The product may be customized by the purchaser, by a vendor, or by another party to meet the requirements of the customer. Since MOTS product specifications are written by external sources, purchasers may not have control of future changes to the product.
MVI	Motor Vehicle Incident

MW	Megawatt is a thousand Kilowatts. A unit of Measure for energy measurements.
MWh	Megawatt-hour
NBC	Non-Bypassable Charge
NERC	North American Electric Reliability Corporation
Nginx	A Reverse Proxy used in the RPSD System Architecture.
NIST	National Institute of Standards & Technology. Reference: https://www.nist.gov/
NIST SP	NIST Special Publication
NMV	Net Market Value
Non-Functional Requirements	Non-functional requirements provide criteria to evaluate the operation of an enabling solution and primarily represent qualities of (expectations and characteristics) and constraints on the solution. They capture conditions that do not directly relate to the behavior or functionality of the solution, but rather describe environmental conditions of an effective solution or productive qualities of the solution. Mid-level non-functional requirements also define quality of service requirements, such as those relating to required capacity, speed, security, privacy, availability, response time, throughput, usability, and the information architecture and presentation of the user interfaces.
Normal Process Flow	Describes the primary business process workflow within an organization, department, or a business program or system. Normal flows cover the primary processes as opposed to alternative processes which are exceptions to the primary process. (Usually normal process flows occur in eighty (80) percent of the cases whereas alternative flows occur in twenty (20) percent of the cases).
Notification	A message or an alert that indicates a system or a business event. This is sent via an email, text, or as a message within the system and is shown in a user dashboard, or status bar.
NPV	Net Present Value
NQC	Net Qualifying Capacity
NYME	New York Mercantile Exchange
OCM	Organizational Change Management. Getting the organization ready for change through creating awareness, training, and familiarization of new business processes, new work procedures, or a new System.

Office of the Governor	Also known as the Governor's Office. In the context of the RPSDB Project, the Governor's Office monitors the progress of RPS goals, milestones, geographical distribution, procurement costs and generation costs. Receives periodic and on-demand reports from CPUC based on data maintained in the RPS database.
Open Source Software	Publicly available software that is free to use, modify, and distribute under an open source software license by the original creator or by a collaborative project from open source software foundation such as Apache.org. This is in contrast with proprietary software owned by a company which charges a fee for its use or purchase. Examples of open source software are PostgreSQL, Python, and Django Web framework.
Operations Log	Operations log contains a list and high level information about all the activities undertaken by the operations team to maintain the system. This is a historical log used for audit purposes.
Operations Manual	A document that provides a list of operational tasks, when each task is performed, step by step procedures for performing the tasks, and checklists for day-to-day system support and operations. This document will help familiarize a newcomer to the system operations. The operations manual includes procedures for: • Graceful shut down and restarting of the system • Creating backups • Monitoring the system and responding to system alerts • Making configuration changes, deploying new releases, and scaling up the system • System performance tuning • Disaster recovery • Incident response and incident resolution • Status reporting • System failover verification The operations manual also contains: • CPUC and Contractor contacts • Scheduled jobs/ batch processes • Maintenance Schedules • References and links to other documents which provide additional details
OS	Operating System
OSHA	Occupational Safety and Health Administration
OTC	Once-Through Cooling
Output	End Product or Outcome from a System Process or Function.

PaaS	Platform as a Service. A Platform containing hardware, software, and application, which are offered as a service.
PAV	Portfolio Adjusted Value
Payment Milestone	Payment milestone is a project milestone that is associated with a payment. Payment milestones are predefined and tracked for variances. When a payment milestone is reached, milestone deliverables are submitted for review and acceptance by the CPUC. Upon acceptance of the deliverables, the Contractor may invoice the CPUC.
PBR	Procurement Balance Requirement
PCC	Public Contract Code
PCC0	Portfolio Content Category 0 (PCC 0)- RECs Not Subject to Portfolio Content Category Classifications 1, 2 and 3. Procurement claims from contract/ownership agreements executed before June 1, 2010, are not subject to the PCC classifications established in D.11-12-052. For the purposes of RPS compliance, any eligible RPS RECs that are not subject to PCC 1, 2, or 3 will be placed in their own classification, which Energy Division staff categorize as PCC 0.
PCC1	Portfolio Content Category 1 (PCC 1) - Renewable energy and RECs from the facilities with first point of interconnection within a California Balancing Authority (CBA) or with Generation Scheduled into a CBA.
PCC2	Portfolio Content Category 2 (PCC 2) - Renewable energy and RECs with incremental electricity, and/or substitute energy, from outside a CBA. Generally, Category 2 RECs are generated from out-of-state renewable facilities and require a Substitute Energy Agreement that details the simultaneous purchase of energy and RECs from an RPS eligible facility.
PCC3	Portfolio Content Category 3 (PCC 3) -Electricity Products Not Qualifying as PCC 1 or PCC 2, Including Unbundled RECs.
PCIA	Power Charge Indifference Adjustment
PD	Proposed Decision
PDF	Portable Document Format.
PEL	Procurement Expenditure Limitation
Pen Testing	Penetration Testing. Performed to discover any vulnerabilities within the System that allow a malicious attack to take place. Please also refer to Penetration Testing.

Penetration Testing (or Pen Testing)	A type of security testing that tries to break into the system and web application to find the loop holes in the setup so they can be plugged. The AWS support team conducts the penetration testing at the request of the CPUC. The CPUC IT infrastructure manager, ISO, and the Contractor may be involved in reviewing the results and implementing any recommendations.
Performance Metrics	System Performance Measures - a set of functions and corresponding expected versus actual response times.
Performance Testing	A simulated testing that finds out how the system performs at a given data volume, transaction volume for a specific system size. By altering a system component, capacity, or configuration, the performance will be remeasured to bring it within the required thresholds. When a diagnostic or observation determines that there is an issue in a program, it will be checked and corrected. System performance is broken down into database performance, application performance (server and client), and network performance. Caching and compression techniques will be employed to increase application performance, indexing, data partitioning, and query modification techniques that will be used to increase database performance.
Permitting Agencies	Local and Federal Permitting Agencies who review and approve RPS Projects (renewable energy generation and transmission projects) based on applicable law and environmental and land use regulations.
PFM	Petition for Modification
PG&E	Pacific Gas & Electric. An Electric Utility operating in the State of California by the name PG&E.
PIER	Post Implementation Evaluation Report. PIER is a mandatory report that the CPUC and other State agencies must submit to State Legislative Analyst Office (LAO) after a system has been successfully implemented. PIER contains feedback from system stakeholders, management, and support personnel (Contractor team) as to how the system is performing in the Production environment in terms of meeting stakeholder expectations, user experience, manageability, and operability. It also will contain lessons learned from the system implementation deployment. PIER is usually submitted after one (1) year of operation and before two (2) years of operation.
PII	Personally Identifiable Information. PII includes a person's name, phone number, email address, home address, education, description, and government issued identifications.

PIV	Production Implementation Verification. The process of testing after a production deployment to make sure the System works as expected.
PM	Project Manager
PNG	Portable Network Graphics - A format for Printing documents.
Portfolio Content Category (also PCC)	There are four categories: PCC 0, PCC 1, PCC 2, PCC3.
PostGIS	GIS stands for Geographical Information System. PostGIS is an add-on Software Component/Extension that works with PostgreSQL Database Server to facilitate GIS Data Management (Storage, update, and retrieval)
PostgreSQL	A Relational Database Management Software that is build based on Open Source Software. First developed at University of California, Berkeley and now supported by Global Open Source Community. An open source relational database management system which allows data to be organized in tables that are interrelated based on primary key (which uniquely identifies a row or record in a table) and foreign keys (that store the primary key of another table so both tables can be related). Other data structures include indexes and views. Database definition is also organized as data (metadata) in tables called catalog tables. AWS offers an RDS based on PostgreSQL database engine. Latest version of PostgreSQL is 13.x at the time of this document creation. Reference: https://www.postgresql.org/
Power Exchange (PX)	The entity that will establish a competitive spot market for electric power through day and hour ahead auction of generation and demand bids.
PPA	Power Purchase Agreement
PPC	Public Purpose Program
PPTA	Power Purchase and Tolling Agreement
PQR	Procurement Quantity Requirement
Pre-production Environment	An environment that mimics a Production environment in size, architecture, and complexity. Used for deploying and verifying Production Ready Systems before they are actually deployed in Production environments. Pre-Production environment may also be used to simulate problems reported in the Production environment for diagnostics purposes.
PRG	Procurement Review Group

Priority	Refers to addressing work items in a relative order with High priority items first followed by Medium priority items and ultimately Low priority items. This allows for allocating resources and to focus on items that are more important or are urgently needed.
Problem Escalation	When a problem is not resolved in the expected time, or there is unusual delay, the problem is escalated to a higher authority for action or direction.
Procure	"Procure" means to acquire through ownership or contract.
Procurement Entity	"Procurement entity" means any person or corporation authorized by the commission to enter into contracts to procure eligible renewable energy resources on behalf of customers of a retail seller.
Procurement Official	An authorized person who conducts Procurement on behalf of an agency or Organization.
Production	Refers to Production or live environment as opposed to Development, Testing, Training, and Pre-Production environments.
Project Development Status Report/ PDSR	A report about the status of an RPS generation project. Tracks the construction of RPS generation projects.
Project Steering Committee	A decision making body that reviews Projects, Status, Risks, and Issues and makes decisions to resolve issues or overcome difficulties.
Project/ Transitional Requirements	Project/transition requirements describe capabilities that the solution must have in order to facilitate the transition from the current state of the enterprise to a desired future state. Mid-level project/transition requirements are differentiated from other requirement types because they are usually temporary in nature and will not be needed once the transition is complete. They typically cover process requirements imposed through the Contract, such as mandating a particular design method, administrative requirements, data conversion and migration from existing systems, interfaces, skill gaps that must be addressed, and other related changes required to reach the desired future state.
PRP	Preferred Resources Pilot
PSA	Power Sales Agreements
PSC	Project Steering Committee
PT	Pacific Time
PTA/PIA	Privacy Threshold Assessment/Privacy Impact Assessment. A formal document that provides information about privacy requirements of a System and their impact.
PTC	Production Tax Credit

PTO	Participating Transmission Owner
Public Contract Code	Enacted by California State Legislature, the Public Contract Code refers to Public Contract Law.
Public Goods Charge (PGC)	Public Goods Charge (PGC) is a nonbypassable surcharge imposed on all retail sales to fund public goods research, development and demonstration, and energy efficiency activities; and possibly to support low income assistance programs.
Publicly Owned Utilities	These are Utilities that are owned by local Governments such as a Town, City, or County. Examples include SMUD (Sacramento Municipal Utility District), LA Department of Water and Power. Customer rates are set by each utility's governing body-board or city council in a public forum.
Public Utilities	Refer to Publicly Owned Utilities.
Public Utilities Code	Enacted by California State Legislature, the Public Utilities Code refers to Public Utilities Law.
Public Website	RPSD Project seeks to build a public facing website designed to host non-confidential RPS data that can be accessed by the Public. This website will be modeled after https://californiadgstats.ca.gov website. Detailed requirements for the public website will be documented by the Contractor in consultation with CPUC Energy Division staff.
PuTTY	Please refer to: https://putty.en.softonic.com/ PuTTY is a free and open-source data transfer, terminal emulator, and serial console for Windows. It supports various network protocols to establish a secure connection for transferring sensitive information. Created by Simon Tatham, this is now maintained by developers from around the world. It offers a command-line interface that you can customize according to your requirements.
PV	Photovoltaic
Python	Python is a programming language and a programming environment that contains an interpreter to execute python code. Python lets one work more quickly and integrate one's systems more effectively. Please refer to https://www.python.org/ which provides: Python is a fourth generation object oriented and portable programming language. Python is developed under an Open Source Initiative (OSI) approved open source license, making it freely use and distribute. Python's license is administered by the Python Software Foundation. References https://www.python.org/psf/ , https://www.python.org/about/
QA	Quality Assurance
QCR	Quarterly Compliance Report
QF	Qualifying Facility

RA	Resource Adequacy
RAM	Renewable Auction Mechanism
RDS	Relational Database Service. RDS is offered by AWS in place of Customers installing their own relational database management system software. RDS is available for PostgreSQL engine. RPSD System uses AWS RDS for PostgreSQL.
REC	Renewable Energy Credit
REC - Renewable Energy Credits	“REC” is the unit of accounting for RPS procurement and compliance. One REC = one (1) megawatt-hour of electricity that was generated from an eligible renewable energy resource and was fed into the shared system of power lines which transport energy. RECs are transferable and tradable. The Organizations that are short of RECs for compliance may purchase RECs from other sources.
Recovery point Objective (RPO)	Refers to a Recovery Point in the past from the time of System Failure. RPO defines the backup and recovery strategy. A five (5) minute RPO means, the business is willing to lose five (5) minutes of work when the System goes down. So, the IT organization ensures that backups (initial backup followed by incremental backups or transaction logs) are taken every 5 minutes so any system failure will not cause a loss of more than five (5) minutes of work or data.
Recovery Time Objective (RTO)	Refers to how long it takes to recover the System from a failure. Measured in minutes. Thirty (30) minutes RTO means within thirty (30) minutes of a System Failure, the System will be recovered and will be operational.
Regression Testing	Re-testing all the impacted components of a system so a change introduced does not break some other functionality within the system.
Renewables Net Short	The number of RECs an Organization is short for RPS Compliance (Target minus actual procurement).
Renewables Portfolio Standard / RPS	RPS - Renewables Portfolio Standard defines that a certain percentage of Electricity, within the Energy Procurement Portfolio of a Electricity Retail Seller, must be procured from approved Renewable Energy Sources. RPS has specific goals set for future years to reduce electricity generation from non-renewable sources such as fossil fuels.
Reporting Entity	For RPS purposes, Reporting Entity is a Retail Seller (an IOU, SMJU, CCA, or ESP operating within the State of California)
Requirements Validation	A review of documented requirements with the concerned to verify if the requirements are clear, cohesive, and complete without any gaps. Requirements are required to be specified to start work on any design or development projects.

Response Time	How long does it take to respond or to perform an action. Response time may also be associated with Problem resolution time - the time taken to resolve an issue from the time it is first reported.
Responsible Bidder	A bidder who is fully capable of performing the contract. Considerations include a supplier deemed to satisfactorily demonstrate some or all of the following, pertinent to the specific transaction: 1. Adequate financial resources or the ability to obtain the resources required to perform the contract; 2. An adequate cost accounting system; 3. The capability to comply with the required or proposed delivery or performance schedule considering all existing commitments; 4. A satisfactory record of performance; 5. A satisfactory record of integrity; 6. Qualified and eligible to receive an award under all applicable laws and regulations; and/or 7. Necessary organization, experience, operational controls and technical skills (or the ability to obtain them).
Responsive Bidder	A bidder whose solicitation response is compliant with the solicitation requirements and indicates performance without material deviation from the terms and conditions of the proposed contract.
Retailer	An electric service provider who enters into a direct access transaction with an end-use customer, i.e., aggregators, brokers, and marketers.
Retail Sellers/ Retail Sellers of Electricity	An entity engaged in the retail sale of electricity to end-use customers located within the state of California, including any of the following: 1. An electrical corporation, as defined in Section 218 of Public Utility Code. 2. A community choice aggregator. A community choice aggregator shall participate in the renewables portfolio standard program subject to the same terms and conditions applicable to an electrical corporation. 3. An electric service provider, as defined in Section 218.3 of Public Utility Code. The electric service provider shall be subject to the same terms and conditions applicable to an electrical corporation.
RETI	Renewable Energy Transmission Initiative
Reverse Proxy	A Hardware/Software combination that is part of a Security Architecture that lets any incoming traffic go through a server before it reaches an end user within the Organization. Please refer to Nginx.

RFO	Request for Offer
RMAT	Renewable Market Adjusting Tariff
RNS	Renewable Net Short
RPS	Renewables Portfolio Standard - A California State's Energy Policy that requires the electricity retail sellers to procure a certain percentage of electricity from approved renewable sources.
RPS Admin	A User who has been assigned a role of RPS Administrator. RPS Admin will have authority to activate/deactivate a System user, change metadata used by the System for Web Page creating, informational, and error messaging within the System, or replace Static Web Pages with newer versions.
RPS Annual Report	A Mandatory Report that Retail Sellers must submit annually to the CPUC. The existing RPSD web portal has functionality that allows the RPS Annual Report file upload, validation, and submission. The RPS Annual Report compiles retail sellers' compliance data and tracks progress toward RPS obligations.
RPS Compliance ID	RPS ID in the Compliance Report - specific to a Project.
RPS Contract	An RPS Contract specifies the term and conditions, costs, and obligations between a renewable energy supplier and the retail seller.
RPS Database	The database used by the RPSD System. The RPS data is stored for tracking, review, and reporting purposes.
RPS Guidebook	CEC’s RPS Renewables Portfolio Standard Eligibility Commission Guidebook
RPS Monthly Report	A Mandatory Report that Retail Sellers must submit monthly to the CPUC. The existing RPSD web portal has functionality that allows the RPS Monthly Report file upload, validation, and submission. The Electricity Retail Sellers submit this file once a month around the 15th containing data for the prior month. This replaces the Project Development Status Report (PDSR) and provides reporting to ensure that the Retail Sellers are making sufficient progress towards meeting their RPS requirements, and better facilitate public access to information, per Ordering Paragraph 11 of decision D.17-12-007).

RPS Offer File	RPS Offer file consists of a list of RPS offers that a Retail Seller received for Procurement purposes. The CPUC must review and approve an RPS Offer before an RPS Contract may be awarded to a supplier. RPS Offer file is a data file containing RPS Offer data in a predefined format based on CPUC Excel file Template. The Electricity Retail Sellers submit this file on an ad-hoc basis when there is data to report. The file is uploaded to the RPS Web Portal, validated by the System and when it is error free the User submits the file for CPUC Review. This report contains confidential data that is subject to time limits. When the required time elapses, the data may be made public. This requires Retail Sellers to provide a status update on the development schedule of all eligible renewable energy resources currently under contract and in their queue and inform future planning decisions.
RPS Procurement Plan	RPS Procurement Plan is a mandatory data submission by Retail Sellers to the CPUC. RPS Procurement Plan specifies the retail sellers estimated demand and supply for future years and actual demand and supply for the prior periods. This report is based on a predefined CPUC Excel file template. The report is also accompanied by a narrative - in either a MS word document or a PDF file, a confidentiality report, and an attestation. A draft RPS Procurement Plan must be submitted once a year prior to August 1st. When the draft procurement plan is reviewed and approved by the CPUC, it becomes an approved RPS Procurement Plan. Currently the RPS Procurement Plan is submitted over a secure FTP site. When the new RPSD System goes live, the RPS procurement plan and associated files can be submitted by the retail sellers over the RPSD Web Portal. It will undergo the necessary validations, and then used as input to update the RPS database. The raw file is also stored in the RPSD System's file storage area. This document is required by the RPS statute that requires retail sellers to prepare an annual RPS procurement plan for Commission review to track and approve their RPS procurement in order to achieve the state's RPS standards both short and long term.
RPS Program Staff	Energy Division Staff who are in-charge of RPS program at CPUC.

RPS Public facing Website/ RPS Public Website	RPS Public facing Website will allow the public to get information about the RPS Program within the State of California. No user id is required. All non-confidential RPS data will be available for users to query, review, and download. Data presentation will use tables, graphs, charts, maps, and interactive tableau workbooks. This website does not exist but will be created as part of this RPSD Project - this website will be designed along the lines of California DGSTATS website https://californiadgstats.ca.gov. This is slated to be implemented during the first half of FY 2023-24.
RPS Semi-Annual Report	The RPS Annual Report will be discontinued in the new RPSD System, and in its place RPS Semi-Annual Report will be used. It has same data structure as RPS Annual Report but is reported twice in a year.
RPS Tableau Interface for CPUC Staff	CPUC staff access the RPS database using a pre-configured Tableau Client. Using Tableau, the staff will query the RPS transformed/predefined datasets/database tables for analysis and reporting. The client configuration uses PostgreSQL driver over SSL to reach the RPS database by using the Database URL and a specific access port. The CPUC staff will use their individual logins to the database which has a special role assigned to them to facilitate data access to interface tables and views.
RPSD	Renewables Portfolio Standard Database.
RPSD System	RPSD System comprises of RPS database, RPSD web portal, CPUC staff interface to the RPS database, and a data warehouse program interface to the RPS database. The current RPSD System has limited functionality. The RPSD Project is undertaken to extend the functionality of the existing RPSD System and also to create a new RPSD public facing website.
RPSD Web Portal	An interactive website used by retail sellers to submit RPS data to CPUC and to track their submissions. The current RPSD web portal has limited functionality and is limited to the three large IOUs. The new RPSD web portal will provide extended functionality and will allow SMJUs, CCAs, and ESPs to submit RPS data to CPUC in addition to the three large IOUs. It will also have extended functionality that lets stakeholders submit RPS Procurement Plan, RPS Compliance Report, and RPS geospatial data/shape files.

RTM	Requirements Traceability Matrix. RTM is a tool to keep track of detailed solution requirements coverage and fulfillment through a Project's SDLC phases and deliverables. The RTM contains references of how the requirements are covered in the system detailed designs, test plans, and delivered system components. The RTM may also contain inter-relationships between requirements. The RPSD Project uses an excel file for RTM based on CDT's RTM format. The Contractor will maintain the RTM to document coverage for requirements and fulfillment through various phases of SDLC and to update the RTM for any changes (Add/Modify/Delete actions) in requirements.
SaaS	Software as a Service. Instead of distributing software to each client, software runs on a hosted internet or network environment which the client will access over a private network or internet. Customers are charged based on usage or monthly or annual subscription. No perpetual licenses are issued.
SAM	System Administration Manual. Reference: https://www.dgs.ca.gov/Resources/SAM
SANS	Stochastically-Adjusted Net Short, Also, System Administration, Network, and Security
SANS Institute	System Administration, Networking, and Security Institute. SANS institute offers Cybersecurity awareness online training to CPUC staff and contractors. Reference: https://SANS.org
SB100/Senate Bill 100	Officially titled “The 100 Percent Clean Energy Act of 2018,” Senate Bill 100 (SB 100, De León): Sets a 2045 goal of powering all retail electricity sold in California and state agency electricity needs with renewable and zero-carbon resources — those such as solar and wind energy that do not emit climate-altering greenhouse gases. Updates the state’s Renewables Portfolio Standard to ensure that by 2030 at least 60 percent of California’s electricity is renewable. Requires the Energy Commission, Public Utilities Commission and Air Resources Board to use programs under existing laws to achieve 100 percent clean electricity and issue a joint policy report on SB 100 by 2021 and every four years thereafter. Reference: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB100

SB1078/Senate Bill 1078	California's RPS program was established in 2002 by Senate Bill (SB) 1078 (Sher, 2002) with the initial requirement that 20% of electricity retail sales must be served by renewable resources by 2017. Reference: https://www.cpuc.ca.gov/rps
SB350/Senate Bill 350	California Senate Bill 350. Also known as Clean Energy and Pollution Reduction Act of 2015, which requires doubling of Energy Efficiency/ Energy savings by 2030. Senate Bill (SB) 350 (de León, Chapter 547, 2015) requires the CPUC to focus energy procurement decisions on reducing greenhouse gas (GHG) emissions by 40 percent by 2030, including efforts to achieve at least 50 percent renewable energy procurement, doubling of energy efficiency, and promoting transportation electrification. Reference: https://www.cpuc.ca.gov/sb350/ https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB350
SB697/Senate Bill 697	SB 697, Hertzberg. Public Utilities Commission Accountability Act of 2015: reports: audits: electrical restructuring: charter-party carriers of passengers. The California Constitution establishes the Public Utilities Commission and authorizes the commission to exercise ratemaking and rulemaking authority over all public utilities, as defined, subject to control by the Legislature. Existing law requires the commission to report various information to the Legislature. This bill would adopt the Public Utilities Commission Accountability Act of 2015. The bill would recast certain of the commission's reporting requirements to an article within the Public Utilities Act pertaining to reports by the commission to the Legislature and make other conforming changes. The bill would require the commission to report specified information on a quarterly basis relative to implementation of the California Renewables Portfolio Standard Program. Reference: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB697
SCE	Southern California Edison. One of the three large IOUs operating in the State of California.
Scheduling Coordinators (SCs)	Scheduling Coordinators (SCs) are entities certified by the Federal Regulatory Commission that act as a go-between with the ISO on behalf of generators, supply aggregators (wholesale marketers), retailers, and customers to schedule the distribution of electricity.

SCP	Secure Copy. SCP is a windows utility to securely copy files from one network device to another. SCP can be used to copy files from a client desktop/laptop to AWS EC2 Servers.
SDG&E	San Diego Gas & Electric. One of the three large California IOUs.
SDLC	System/Software Development Life Cycle. SDLC is a methodology or approach to develop Software Applications or Information Systems. An orderly phased process to develop Information Systems by following the SDLC methodology in which Requirements, System Designs, System Development, System Testing, UAT, Training, and System Deployments are done in a sequence. When changes occur, regression testing is done to ensure no new errors are introduced into an already tested and verified system component.
Senate Bill	A Senate Bill is a proposal introduced by one or more State Senators for consideration, review, and approval by the Senate and Assembly. A bill is reviewed by a committee and then is voted on by the Senate and Assembly. When a Senate Bill is approved by both the Senate and Assembly, and is signed by the Governor, it becomes a Law or part of California Codes.
Service Level Agreement/ SLA	Service Level Agreement (SLA). An agreement between a Service Provider/Contractor and a Customer about the Service Levels and Service Quality requirements and associated terms such as response times, response priorities, incident severities, incident/ problem reporting, initial response, final resolution, escalation process, scope, hours of coverage, and penalties for non-compliance.
Severity	The severity of the problem based on the business impact the problem will have on business or business operations. Severity is usually measured from a business perspective.
SFTP	Secure File Transfer Protocol.
Shapefile	Geospatial file that provides the contour or shape of a location, site, or infrastructure such as a building.
SharePoint	A cloud based or network file sharing service offered by Microsoft. The CPUC uses the SharePoint file sharing and collaboration services for projects in flight.
Short Term Procurement	Procurement that provides coverage in the short term of less than ten (10) years.
SIMM	System Information Management Manual. Reference: https://cdt.ca.gov/policy/simm/
SIT	System and Integration Testing (or System and Interfaces Testing). SIT is conducted using System Test Plans and Interfaces (both outbound and inbound) testing plans.

Sitecore	A web content management system used by CPUC for its main website https://www.cpuc.ca.gov A company by that name may be reached at https://www.sitecore.com
SLA	Service Level Agreement. Please refer to Service Level Agreement definition/description above.
SME	Subject Matter Expert. RPSD Project uses this term to refer to business SMEs from the Energy Division who provide the business requirements, validate the user interaction/interface designs, integration designs, and the finished work product/ system.
SMJU	Single and Multi Jurisdictional Utility. SMJUs are a category of IOUs (Investor Owned Utilities) who submit RPS data to CPUC. Examples include: Bear Valley Electric Services, and Liberty Utilities.
SMTP	Simple Mail Transfer Protocol.
SOC	System and Organizational Controls. Reference: https://aws.amazon.com/compliance/soc-faqs/ System and Organization Controls (SOC) for Service Organizations are internal control reports created by the American Institute of Certified Public Accountants (AICPA). They are intended to examine services provided by a service organization so that end users can assess and address the risk associated with an outsourced service.
Solar PV	Renewable Energy Resource/Technology Type of Solar Photo Voltaic Cells.
Solicitation	Solicitation is an invitation to bid, submit proposals, offers, provide price quote, or information.
Solution Requirements	Describes the characteristics of a solution that will meet the business requirements. Solution requirements describe specific characteristics of the solution both in terms of functionality and quality of service. Solution requirements are sub-classified into functional requirements, non-functional requirements and project/ transitional requirements.
SONGS	San Onofre Nuclear Generating Station
SONS	Stochastically-Optimized Net Short

Special Project Report/SPR	A Special Project Report is mandated by CDT when a Project exceeds the allowed threshold of ten (10) percent from the baselines defined at Project Start Date. The SPR is required to explain why the Project Scope, Schedule, or Budget differs from the approved baselines by more than ten (10) percent. The SPR needs to be prepared based on a CDT template created for that purpose. Until CDT received and approved an SPR, additional Project Costs exceeding the ten (10) percent threshold cannot be incurred. Project essentially comes to a halt and will only proceed after CDT approves the SPR and allows additional costs, scope, or schedule.
Sponsor	Please refer to Executive Sponsor
SPVP	Solar Photovoltaic Program
SQL	Structured Query Language. SQL is provided by the relational database software vendors and creators to create, modify, and query data. SQL contains a DDL, Data Manipulation Language (DML), and Query Language. Database vendors or providers may offer enhanced SQL with additional constructs than the standard ANSI SQL.
SQL Injection	SQL injection is a code injection technique that might destroy a database. Also, SQL injection is the placement of malicious code in SQL statements, via web page input. SQL injection is one of the most common web hacking techniques.
SRAC	Short Run Avoided Cost
SSL	Secure Sockets Layer.
State	State of California.
State Business Hours	8:00 AM to 6:00 PM Monday through Friday, except State holidays.
Statement of Work (SOW)	A written description of work to be performed under a contract to satisfy the State's needs. It can include what is to be done, when, where, and how plus define the roles and responsibilities of the State and the contractor. Sometimes referred to as scope of work.
STP	State Technology Procurement. A division within CDT that manages Procurements for State Agencies, when the Procurement Budget exceeds the budget authority of a State Agency.
Supply Commercial Customer	A customer that has a maximum peak demand of less than 20 kilowatts.
SWPL	Southwest Powerlink
System Defect	A flaw in a component or system that can cause the component or system to fail to perform its required function.
System Enhancement	An expansion of system functionality to include a new requirement after the start of the implementation contract.

System Maintenance	Routine operations to be defined by the system development Contractor to ensure continuous system functionality.
System and Integration Testing (SIT)	Term used to encompass testing of the system. The system testing will execute system test plans that cover end-to-end business processes. It will also cover individual component testing, interfaces testing, and workflows.
System Test Environment	The environment setup for the purpose of system testing and interfaces testing, collectively known as system and integration testing environment.
System Upgrade	The environment setup for the purpose of system testing and interfaces testing, collectively known as system and integration testing environment.
Tableau	A data Analytics and data visualization Software by that name. Tableau Server Software, and Client Software are distinct and serve different purposes. The software was originally developed by a company named Tableau which was acquired by Salesforce.
Tableau Designer Tool	A Tableau Client Software that allows the user to design and develop simple to complex Tableau Reports using one or more data sources.
Tableau Public or Tableau Public Server	A Tableau Server hosted by the company which produces Tableau software. It is open to Tableau customers and customers do not incur additional costs for its use.
Technology Type	Refers to Technology Type used for electricity generation. For RPS System, it is the technology type used for renewable electricity generation.
Test Bed	Data within the system (database and file system) that is required to perform a test. Pre-existing data prior to processing any inputs and updates.
Test Case	A Test case is part of a Test Item that is part of a Test Plan. Test case provides unique inputs, a test condition, and identifies what the outcome is. That actual results will be measured or compared against the expected outcome/output.
Test Data	Inputs used in a Test
Test Item	A Test Item tests a unique functionality within the System. It uses multiple test cases to verify if the test item is working correctly or as required.

Test Plan	A structured design document that provides an overview of the testing process, a list of test items, test cases, test conditions (entry criteria and exit criteria), test data, inputs, user interaction, expected results, and provision for reporting/recording actual outcomes. Creating Unit Test Plans and System Test Plans are the responsibility of the Contractor whereas User Acceptance Test Plan is created by the CPUC.
Testing	A Process which simulates the actual operations of a System. Testing is used to discover defects and to validate a System's functionality, data, configurations, and operating environment.
Testing Lead	A Key Staff member in the Contractor's team who will lead and perform testing and QA activities for the RPS System (RPS Database, RPSD Web Portal, and RPSD Public Website).
Three Large IOUs	Refers to the three large Investor Owned Electric Utilities within the State of California: Pacific Gas & Electric or PG&E, Southern California Edison or SCE, and San Diego Gas & Electric - SDG&E.
TIFF	Tagged Image File Format. An Internet image file format.
TLS	Transport Layer Security. A cryptographic protocol that provides end-to-end security of data sent between applications over internet. It is the successor to the secure sockets layer (SSL) protocol. The latest version is TLS 1.3 that is embedded in the applications, such as the web browser.
TOD	Time Of Delivery/Day
TPP	Transmission Planning Process
Transitional/ Project Requirements	Transition/ Project requirements describe capabilities that the solution must have in order to facilitate the transition from the current state of the enterprise to a desired future state. Project/ transition requirements are differentiated from other requirement types because they are usually temporary in nature and will not be needed once the transition is complete. They typically cover process requirements imposed through the Contract, such as mandating a particular design method, data conversion and migration from existing systems, interfaces, skill gaps that must be addressed, and other related changes required to reach the desired future state.
TRTP	Tehachapi Renewable Transmission Project
TURN	The Utility Reform Network
TWRA	Tehachapi Wind Resource Area

UAT	User Acceptance Testing. A required stage of testing during which System users can use a pre-production system component and log defects for correction prior to acceptance. The UAT verifies if all the business capabilities, required functionalities, normal business process flows, and alternative business process flows are supported by the RPSD System. User Experience, ease of using the System, intuitiveness, and performance are also graded as part of user feedback which may be actionable.
Ubuntu	A Linux Operating System.
Unbundled REC	The term "unbundled REC" is used to describe RPS procurement that does not include purchase of the RPS-eligible energy associated with the REC.
Unit Testing	Unit testing is the process of testing individual functionalities, programs, or web pages per a defined test plan and documenting the test results.
Unit Test Plan	The unit test plans are used to conduct unit testing and to document the unit test results. Unit test plans will contain the following information about the program, functionality, or a webpage to be tested: • Test case/ use case • Entry criteria or pre-condition • Exit criteria or post-condition • Inputs, user actions, and output for the test case
UOG	Utility-Owned Generation
Upgrade	System change (changes to data model, code, and documentation) to introduce new features, functionality, or to be compatible with a newer version of the underlying platform/ software infrastructure. Examples include database version, operating system version, or a programming language version.
URL	Uniform Resource Locator or Universal Resource Locator. Uses standard protocol to retrieve a resource over the web. Usually a http or https protocol is used with URLs. Other protocols like file, ftp, sftp may also be used.
USB	Universal Serial Bus
User Interface/ UI	UI refers to online screens, menus, webpages, or forms that a system user uses to navigate the system, read instructions, download documents, data file templates, submit data, query data, update data and perform other available functions.
Utility Distribution Companies (UDCs)	Utility Distribution Companies (UDCs) are the entities which will continue to provide regulated services for the distribution of electricity to customers and serve customers who do not choose direct access.
uWSGI	Web Server used by the RPSD web portal.

VAR	Volt Ampere Reactive
Variance	Difference between what is expected and what is actual, usually expressed as a percentage.
VIE	Variable Interest Entities
Virtual Direct Access	Virtual Direct Access is also known as the hourly PX rate option. This rate option allows customers to purchase electricity on a rate schedule that reflects their usage in real time or time of use increments based on the PX price.
Virus Scan	All uploaded data files to the RPSD Web Portal are to be virus scanned to prevent infected files from being imported to the database or saved to the file system. An infected file will be rejected by the virus scan (or antivirus scan) software, utility, or program.
VMOP	Voluntary Margin of Procurement (PG&E); Voluntary Margin of Over Procurement (SDG&E and SCE)
VPC	Virtual Private Cloud, a secure infrastructure, offered by AWS, so customers can configure their System resources in a secure private environment.
Vulnerability Scan	An IT Security process by which vulnerabilities within a System are checked by a Software Utility or a standard methodology. Web applications are tested for vulnerability by using specific tools and methods prescribed by the CPUC ISO. Vulnerability testing/scan may produce actionable items for the Contractor to fix
WA	Work Authorization
Warranty	Assurance that the Product or Service supplied is without defects. When there is a defect, the supplier fixes the defect without cost to the Customer during the Warranty period. It is up to the Customer to discover defects or run into problems in day-to-day use in order for them to be covered under the Warranty.
WATER	Water Agency Tariff for Eligible Renewables
Web Development Lead	Development Lead/Web Development Lead is a Key Staff in the Contractor team who is responsible for System Requirements validation, web application/web site design, development an supporting post development activities - testing, training, pre-production deployment, production deployment, and Knowledge Transfer.
Web Portal	Refers to RPSD web portal currently used by the IOUs to submit RPS data that they need to report to the CPUC. The RPSD Project seeks to extend the user base and the functionalities available to them. Detailed Solution Requirements are documented and are available as an Exhibit to the SOW.

WECC	Western Electric Coordinating Council is a non-profit that exists to ensure reliable bulk electric system in the area known as Western Interconnection. WECC has been approved by the Federal Energy Regulatory Commission (FERC) as the regional entity for the Western Interconnection. The North American Electric Reliability Corporation (NERC) delegated some of its authority to create, monitor and enforce reliability standards to WECC through a Delegation Agreement.
WOD	West of Devers
Work Effort Estimate	Estimate for work to be done to achieve a goal or complete a task.
Work Efforts	List of Tasks to be done to reach a goal, or finish a product or service or a component of a product or service.
WREGIS	Western Renewable Energy Generation Information System
WREGIS ID	Western Renewable Energy Generation Information System ID for an RPS Project. An ID for reference.
XML	Extensible Markup Language. A Web Standard to define Data Structures.
YAML	Yet another Markup Language. AWS Configuration files may be written in YAML/YML.
YML	Same as YAML.