



SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY

Request for Proposal (RFP) for a Compressed Air Energy Storage Project

Issuance Date: 11/03/2017

Response Deadline: 1/05/2018

Introduction

The Southern California Public Power Authority (SCPPA) is soliciting proposals for a Compressed Air Energy Storage (CAES) Project. RFP responses shall include the following options: (i) project ownership by SCPPA, (ii) a power purchase agreement with an ownership option or (iii) a power purchase agreement without an ownership option.

Background

SCPPA, a joint powers authority (JPA) and a public entity organized under the laws of the State of California, was created pursuant to the Government Code of California and a Joint Powers Agreement for the purpose of planning, financing, developing, acquiring, constructing, operating and maintaining projects for the generation or transmission of electric energy and associated products and services. SCPPA is a JPA where the Member Agencies have the ability to “opt-in” to the projects they are interested in. SCPPA can procure resources on behalf of Member Agencies with one or more participants.

Membership of SCPPA consists of eleven cities and one irrigation district that supply electric energy within Southern California, including the municipal utilities of the cities of Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles, Pasadena, Riverside, and Vernon, and the Imperial Irrigation District.

Member Agencies' electric utilities are governed by their respective city councils or other locally elected governing bodies. Many Members established voluntary renewable targets before Senate Bill (SB) X 1-2 went into effect, including the percentage of renewable energy they wish to obtain within their portfolio. Some have set targets as high as 40% by the year 2020. Most of our Members have already exceeded their interim targets of 20% renewable energy and are now updating their objectives to meet 33% by 2020 as mandated by SBX1-2 and an even higher renewables target of 50% by 2030 as per the enacted SB 350.

SCPPA has an active working group focused on renewable energy development. This group, with representation from all twelve of the Member Agencies, meets once a month and has reviewed over eight hundred sixty (860) individual proposals since 2007. As a result, approximately 1,876 MW of capacity is

now being or will be delivered through SCPPA resources in support of its members' renewable energy goals.

Area of Interest

SCPPA members have expressed interest in gathering technical assessments and related cost information, to the extent possible, for CAES technologies to meet the needs of their respective electric utilities and the communities that they serve. Recognizing that the CAES market is broad and multiple technologies can be used to store energy, SCPPA is only requesting and accepting proposals offered by Respondents on only technologies that are CAES to be used by electric utilities or their customers to improve their respective operating efficiencies and/or reduce operating costs of their facilities or homes with a Megawatt (MW) output of greater than 100 MW.

The intended location for the CAES project will be at or adjacent to the Intermountain Power Project (IPP) located in Delta, Utah, which is a generation facility owned by the Intermountain Power Agency (IPA). Other locations for this project may be identified by the bidders subject to approval by SCPPA. SCPPA and its members intend to utilize CAES as part of their portfolio in support of adding renewables or other technologies to aid in meeting higher renewable target by 2030. If bidders intend to include Investment Tax Credits (ITC) from the integration of renewable energies as a part of their proposal, bidders shall also include the details of the renewable technology being proposed as well as the pricing details in Table 2 below

Required Elements of Proposals

1. **Transmittal Letter:** Provide a brief statement of the Respondent's understanding of the work to be done and commitment to perform the work as scheduled, including a summary of any exceptions taken to the RFP requirements, statement of work, specifications, and reference to any proposed contractual terms and conditions required by the Respondent. An officer authorized to bind must sign the proposal on behalf of the Respondent and must include the following declarations on the Transmittal Letter:

"This proposal is genuine, and not sham or collusive, nor made in the interest or in behalf of any person not herein named; the respondent has not directly or indirectly induced or solicited any other respondent to put in a sham bid, or any other person, firm or corporation to refrain from submitting a proposal; and the respondent has not in any manner sought by collusion to secure for themselves an advantage over any other respondent."

2. **Applicant Information:** Provide the legal name of the company or entity making the proposal, the legal structure or form of the entity (e.g., Corporation, or LLC), physical address, e-mail address, telephone, and names and titles of individuals authorized to represent the Respondent
3. **Project Details:** The specific information that SCPPA is requesting regarding the proposed compressed air energy storage project includes, but is not limited to:

Table 1 - Project Details	
<u>Project Description</u>	Project Name Proposed Facility Location Point of Delivery (CAISO Grid with preference of SP15, IPP Switchyard, etc.) Contract Term/Structure (ownership, PPA with and without ownership/buyout option, and time frame for buyout eligibility)
<u>Capacity</u>	<i>Storage Capacity</i> Storage Medium Storage Duration at Rated Output (hours) <i>Generation Capacity</i> Output MW Total Available MWh Heat Rate Curves VAR support capabilities/synchronous condenser capabilities Generator Size and Characteristics <i>Compression Capacity</i> Input MW Total Available MWh
<u>Fuel Source</u>	Input MMBtu/hr Gas Source and Pipeline Route Fuel Gas Contracting Strategy Potential for Use of Alternative Fuels
<u>Regulatory Compliance</u>	Compliance with the CEC Guidebook Compliance with all applicable local, state, and federal regulatory requirements
<u>Expected Emissions Profile</u>	Forecasted Emissions Proposed Emission Controls Compliance with Emissions Regulations Dynamic Emission Profiles during Steady Operation and Ramping
<u>Reliability Data</u>	Operating Hours of Existing Units Historical Availability Factors Historical Forced Outage Rates List of Manufacturers for all Major Pieces of Equipment
<u>Availability</u>	24/7, Day shift, Night Shift, or Emergency Only Replacement Cost Guaranteed Minimum Annual Availability (%) Performance Penalty
<u>Energy Availability</u>	Maximum and Minimum Capacity Factors Resource Availability Profile
<u>Round Trip Efficiency (Facility Full Cycle Efficiency and Heat Rate)</u>	Break down of Energy Required for Charging Efficiencies and Losses for all Cycle Stages including Compression and discharge Efficiencies from Storage Facilities

	Total Gas Input Requirements at Applicable Cycle Stages
<u>Delivery Term</u>	All delivery term options available including seasonal and/or intra-day delivery profile options
<u>Dispatchability</u>	Effect of Maximum Storage Pressure on Compression and Ability to take Energy from the Grid Generator Clutch Options and Costs
<u>Facility Flexibility</u>	Startup/shutdown time including cold start, warm start, hot start, or other startup/shutdown restrictions Ramp up/ramp down times
<u>Expansion Options</u>	Additional Size Capacity Additional Cost for Expansion
<u>Operational Procedures¹</u>	Operational Procedures for Remote and Local Dispatch of CAES Different Operational Procedure with other SCPPA Members Different Operational Procedure without other SCPPA Members
<u>Control System</u>	Control to generation and compressor applications described
<u>Usage Application</u>	Ancillary Service and Cost Breakdown
<u>Proposed Schedule</u>	Construction Schedule Proposed Commercial Operation Date (COD)
<u>Miscellaneous</u>	Separate from IPP Operations except for Interconnection

¹ SCPPA participants reserve the right to directly dispatch and control CAES system.

Table 2 - Project Costs ^{1 2 3 4}					
Location	Ownership	Cost Description	Units	Cost w/o ITC	Cost w/ ITC
On IPA Property	SCPPA	Capital Cost (\$/kW)	\$/kW		
		O&M Costs (\$/year)	\$/Year		
		Total Life Cycle Costs (\$/MWh)	\$/MWh		
		Generation Costs (\$/MWh)	\$/MWh		
		Compression (\$/MWh)	\$/MWh		
	Contractor	PPA (\$/MWh)	\$/MWh		
		Generation Costs (\$/MWh)	\$/MWh		
		Compression (\$/MWh)	\$/MWh		
		Buyout Price	\$		
		Capacity Cost	\$/MW		
Adjacent to IPA Property, or other location	SCPPA	Capital Cost (\$/kW)	\$/kW		
		O&M Costs (\$/year)	\$/Year		
		Total Life Cycle Costs (\$/MWh)	\$/MWh		
		Generation Costs (\$/MWh)	\$/MWh		
		Compression (\$/MWh)	\$/MWh		
	Contractor (PPA)	Life Cycle (\$/MWh per year)	\$/MWh		
		Generation Costs (\$/MWh)	\$/MWh		
		Compression (\$/MWh)	\$/MWh		
		Buyout Price	\$		
		Capacity Cost	\$/MW		

¹ Cost of transmission to a delivery point shall be included in the Cost of Energy to any of the delivery points where one or more of the SCPPA Members can receive energy (CAISO Grid or IPP Switchyard). Other delivery points may be identified by Respondents on the condition that any and all associated costs of transmission ancillary services and scheduling are included up to the Point of Delivery. Project costs shall include the full cost of delivery to the customers of SCPPA Members within Southern California. The point of delivery to the CAISO must indicate whether the project qualifies for Resource Adequacy and/or Local Capacity Requirement capacity benefits.

² Ownership option after Investment Tax Credits (ITCs) have been fully claimed by Contractor. If the proposal includes an offer of ownership to SCPPA, describe the proposed ownership, terms and conditions, floors and ceilings for purchase price at different option dates, beginning after ITC capture and up to the end of the term, and operational structures (e.g., 100% SCPPA owned turn-key, corporation, general partnership, limited partnership).

³ Provide a cost breakdown for each attribute in the Project Costs table.

⁴ Buyers shall receive Bucket 1 Renewable Energy Credit if renewables are used to charge CAES and shall be included in cost of energy where applicable.

- 4. Experience:** Respondent will clearly identify project participants and management team including those responsible for design, construction, permitting, operations and maintenance.
- a. Describe your firm's organizational structure, management qualifications, and other contract related qualifications, including number of years the firm has been in business.

- b. Specify key employees and describe their experience with the development, construction, finance closing, commercial operation, and maintenance of similar projects as proposed by Respondent in response to this RFP.
- c. Provide current financial statements of all entities involved as Project participants or as part of the management team. This shall include items such as audited financial statements (not more than twelve months old) annual reports, FERC Form 1, and any other applicable financial information. If none of the above is available, Respondent shall provide verifiable financial statements for the past three (3) years if available and Respondent's Dunn & Bradstreet identification number, where available.
- d. Provide a commitment statement for the retention and use of key employees as proposed, their availability to initiate and sustain the proposal, as well as planned supplemental employees if key employees are not available to assure project delivery.
- e. Indicate any and all pending litigation that could affect the viability of Respondent's proposal or Respondent's financial stability.
- f. Identify existing projects in commercial operation that Respondent has developed and/or operates. Provide a list of references for similar projects completed, including a contact person, phone number and address.
- g. State whether Respondent will use subcontractors to perform services pursuant to the contract. Should the use of subcontractors be included, Respondent shall provide the same assurances of competence for the subcontractor, plus the demonstrated ability to manage and supervise the subcontracted work. Subcontractors shall not be allowed to further subcontract with others for work on this program. The provisions of this contract shall apply to all subcontractors in the same manner as to the Respondent.

RFP Schedule*

Action	Expected Date
RFP Issued	November 3, 2017
RFP Questions Cutoff Date	December 18, 2017
RFP Submittal Deadline	January 5, 2018
Finalists Notified (Estimated)	February 2, 2018

*RFP Schedule subject to change

The deadline to submit questions on this RFP will be 4:00 PM (PDT) on December 18, 2017. Clarification questions may be addressed electronically via email at jquan@scppa.org, referencing **CAES RFP** in the subject line. Answers to all questions will be provided within 5 business days.

RFP Delivery Requirements

One (1) electronic copy of your submittal should be delivered no later than 4:00 pm PST on January 5, 2018 e-mailed to: jquan@scppa.org with Subject/Title as:

[Respondent Name] CAES RFP Submittal

One (1) hard copy of your submittal can or may also be delivered to the address above no later than the time and date referenced above, but hard-copy submittal is not required.

Attention: 2017 CAES RFP
Southern California Public Power Authority
1160 Nicole Court
Glendora, California 91740

SCPPA members seek tangible and timely opportunities to add renewable technologies to their generation portfolios and thus will not entertain experimental or speculative proposals.

Respondents who have previously submitted proposals for consideration and have not received formal regrets notifications from SCPPA may submit updates or revisions to the previous submittals with clearly noted reference to the prior submittal(s) and identify proposed changes, all under a new Transmittal Letter.

Newly submitted proposals by a prior Respondent may make reference to prior submittals for any required elements that have not changed (such as experience) rather than resubmitting boilerplate information.

No contact may be made with the Board of Directors, Committee Members, or SCPPA Member Agencies concerning this Request for Proposals.

All information received by SCPPA in response to this Request for Proposals is subject to the California Public Records Act and all submissions may be subject to review in the event of an audit.

Terms and Conditions

1. If selected, SCPPA desires to enter into exclusive negotiations with respondent as may be facilitated through an execution of a Letter of Intent (LOI), Exclusivity Agreement or other agreements.
2. SCPPA reserves the right to cancel this RFP at any time, reject any and all proposals and to waive irregularities, if any.
3. SCPPA shall determine at its sole discretion the value of any and/or all proposals including price and non-price attributes.
4. Proposals may be sub-divided or combined with other proposals, at SCPPA's sole discretion.
5. SCPPA shall perform an initial screening evaluation to identify and eliminate any proposals that are, for example, not responsive to the RFP, do not meet the minimum requirements set forth in the RFP, are not economically competitive with other proposals, or are submitted by Respondents that lack appropriate creditworthiness, sufficient financial resources, or qualifications to provide dependable and reliable services for this RFP.
6. SCPPA reserves the right to submit follow up questions or inquiries to request clarification of information submitted and to request additional information from any one or more of the Respondents.

7. SCPPA reserves the right, without qualification and in its sole discretion, to accept or reject any or all proposals for any reason without explanation to the Respondent, or to make any award to that Respondent, who, in the opinion of SCPPA, will provide the most value to SCPPA and its Members.
8. SCPPA may decline to enter into any potential engagement agreement or contract with any Respondent, terminate negotiations with any Respondent, or to abandon the request for proposal process in its entirety.
9. Those Respondents who submit proposals agree to do so without legal recourse against SCPPA, its Members, their directors, officers, employees and agents for rejection of their proposal(s) or for failure to execute or act on their proposal for any reason.
10. SCPPA shall not be liable to any Respondent or party in law or equity for any reason whatsoever for any acts or omissions arising out of or in connection with this RFP.
11. SCPPA shall not be liable for any costs incurred by any Respondents in preparing any information for submission in connection with this RFP process or any and all costs resulting from responding to this RFP. Any and all such costs whatsoever shall remain the sole responsibility of the Respondent.
12. SCPPA may require certain performance assurances from Respondents prior to entering into negotiations for work that may result from this RFP. Such assurances may potentially include a requirement that Respondents provide some form of performance security.
13. Prior to contract award, the successful Respondent may be asked to supply a detailed breakdown of the applicable overheads and fringe benefit costs that are part of the labor rates and other direct costs associated with the services to be performed.
14. SCPPA Members, either collectively or individually may contact Respondents to discuss or enter into negotiations regarding a proposal. SCPPA is not responsible or liable for individual Members interactions with the Respondent which are not entirely conducted through SCPPA or at SCPPA's option or election to engage the Respondent as defined within the RFP.
15. Submission of a Proposal constitutes acknowledgement that the Respondent has read and agrees to be bound by the terms and specifications of this RFP and any addenda subsequently issued by SCPPA.
16. Information in this RFP is accurate to the best of SCPPA's and its Members' knowledge but is not guaranteed to be correct. Respondents are expected to complete all of their due diligence activities prior to entering into any final contract negotiations with SCPPA.
17. SCPPA reserves the right to enter into an agreement with more than one Respondent, to choose not to contract with any Respondent with respect to one or more categories of services, and to choose to suspend this RFP or to issue a new RFP that would supersede and replace this RFP.
18. SCPPA reserves the right to negotiate definitive agreements including but not limited to power purchase agreements and other agreements with a Respondent with any and all terms and conditions

that SCPPA and/or its Members deem appropriate or desirable, whether or not such terms or conditions are specifically set forth in this RFP.

19. SCPPA reserves the right to propose that other publicly-owned utilities that are not SCPPA Member Agencies be included in certain contracts.

Additional Requirements for Proposal

1. **Consideration of Responses:** Submitted proposals should be prepared simply and economically, without the inclusion of unnecessary promotional materials. Proposals submitted in hardcopy form should be submitted on recycled paper that has a minimum of thirty percent (30%) post-consumer recycled content and duplex copied (double-sided pages) where possible. (Applicable when the Los Angeles Department of Water and Power (LADWP) is a potential project participant)
2. **Insurance, Licensing, or other Certification:** If selected, the Respondent will be required to maintain sufficient insurance, licenses, or other required certifications for the type of work being performed. SCPPA or its Members may require specific insurance coverage to be established and maintained during the course of work and as a condition of award or continuation of contract.
3. **Non-Discrimination/Equal Employment Practices/Affirmative Action Plan:** If selected, the Respondent and each of its known subcontractors may be required to complete and file an acceptable Affirmative Action Plan. The Affirmative Action Plan may be set forth in the form required as a business practice by the Department of Water and Power of the City of Los Angeles which is SCPPA's largest Member. (Applicable when LADWP is a potential project participant)
4. **Prevailing Wage Rates:** If selected, the Respondent will be required to conform to prevailing wage rates when applicable to the work being performed. Workers in California shall be paid not less than prevailing wages pursuant to determinations of the Director of Industrial Relations as applicable in accordance with the California Labor Code. To access the most current information on effective determination rates, Respondent shall contact:

Department of Industrial Relations
Division of Labor Statistics and Research
PO Box 420603, San Francisco, CA 94142-0603
Division Office Telephone: (415) 703-4780
Prevailing Wage Unit Telephone: (415) 703-4774
Web: <http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm>

5. **Child Support Policy:** If selected, Respondent may be required to comply with the City of Los Angeles Ordinance No. 172401, which requires all contractors and subcontractors performing work to comply with all reporting requirements and wage earning assignments and wage earning assignments relative to court ordered child support. (Applicable when LADWP is a potential project participant)
6. **Supplier Diversity:** Respondents may be required to take reasonable steps to ensure that all available business enterprises, including Small Business Enterprises (SBEs), Disadvantaged Business Enterprises (DBEs), Women-Owned Business Enterprises (WBEs), Minority-Owned Business Enterprises (MBEs), Disabled Veteran Business Enterprises (DVBES), Lesbian, Gay, bisexual, or Transgender Business

Enterprise (LGBTBE) and other Business Enterprises (OBEs), have an equal opportunity to compete for and participate in the work being requested by this RFP. Efforts to obtain participation of these business enterprises may reasonably be expected to produce a twenty-five percent (25%) participation goal for SBEs and three percent (3%) for DVBES. For the purpose of this RFP, SCPPA's Supplier Diversity program is modeled after that of the Los Angeles Department of Water and Power. Further information concerning the Supplier Diversity Program may be obtained from the Supply Chain Services Division of the Los Angeles Department of Water and Power. (Applicable when LADWP is a potential project participant)

7. **Equal Benefits Ordinance:** If selected, the Respondent may be required to comply with the City of Los Angeles requirements of the Equal Benefits Ordinance ("EBO"), codified at Los Angeles Administrative Code ("LAAC") §10.8.2.1, which requires the Respondent who provide benefits to employees with spouses to provide the same benefits to employees with domestic partners. (Applicable when LADWP is a potential project participant)
8. **Contractor Responsibility Ordinance:** If selected, the Respondent may be required to comply with the City of Los Angeles requirements of the Contractor Responsibility Ordinance ("CRO"), codified at LAAC §10.40 et seq., which requires the Respondent and each of its subcontractors to comply with all federal, state, and local laws regarding health and safety, labor and employment, wage and hours, and licensing laws, which affect employees. (Applicable when LADWP is a potential project participant)
9. **Sweat-Free Procurement Ordinance:** If selected, the Respondent may be required to comply with the requirements of the Sweat-Free Procurement Ordinance ("SFPO"), codified at LAAC §10.43 et seq., which requires the Respondent and each of its subcontractors to shun sweatshop practices and adhere to workplace and wage laws. (Applicable when LADWP is a potential project participant)
10. **Iran Contracting Act of 2010:** If selected, the Respondent may be required to comply with California Public Contract Code Sections 2200-2208, wherein all bidders submitting proposals for, entering into, or renewing contracts with Buyer for goods and services estimated at one million dollars (\$1,000,000) or more are required to complete, sign, and submit the "Iran Contracting Act of 2010 Compliance Affidavit".
11. **Los Angeles Municipal Lobbying Ordinance:** If selected, the Respondent may be required to comply with the requirements and prohibitions established in the Los Angeles Municipal Lobby Ordinance if the Respondent qualifies as a lobbying entity under Los Angeles Municipal Code Section 48.02. (Applicable when LADWP is a potential project participant)
12. **SCPPA-Furnished Property:** SCPPA or a Member's utility drawings, specifications, and other media furnished for the Respondent's use shall not be furnished to others without written authorization from SCPPA or the applicable Member(s).
13. **Contractor-Furnished Property:** Upon completion of all work under any agreement developed as a result of this RFP, ownership and title to reports, documents, drawings, specifications, estimates, and any other document produced as a result of the agreement shall automatically be vested to SCPPA and no further agreement will be necessary for the transfer of ownership to SCPPA. SCPPA has the sole right to distribute, reproduce, publish, license, or grant permission to use all or a portion of the deliverable documentation, work product or presentations as it determines in its sole discretion.