INTRODUCTION:

The Los Angeles Department of Water and Power (LADWP) is requesting information from interested parties experienced in the planning, design, and deployment of renewable and/or distributed energy resources. Distributed Energy Resources (DERs) include rooftop photovoltaic generation, distributed energy storage, energy efficiency solutions, demand response, electric vehicle charging solutions, and microgrids including opportunities to expand resiliency projects and support the deferral of distribution system upgrades. Information gathered from this Request for Information (RFI) will assist LADWP in its continued development of renewable and/or DER strategies, programs and capital improvements/investments projects.

LADWP seeks to identify opportunities for increasing and expanding its sustainability efforts and renewable energy initiatives with a focus on emerging technologies, non-emitting energy resources, and alternative approaches. Specifically, LADWP’s objectives are to:

1. Maintain resource adequacy that supplies reliable electricity to the City of Los Angeles at a competitive rate,
2. Provide an environmentally responsible alternative to the predominantly fossil fuel-based electricity generation in the LADWP’s service territory,
3. Maximize the deployment of DERs including opportunities for deferral of distribution system upgrades,
4. Reduce LADWP’s carbon footprint,
5. Enhance operational, system reliability, and cost-efficiency by including DERs at appropriate locations on the LADWP grid,
6. Provide economic opportunities and job creation.

This RFI is issued with the intent to survey the industry, to obtain information on the types of solutions and capabilities available in the DER and/or renewable marketplace, and to solicit additional guidance, input, new ideas, and best practices which may be used in the preparation of a Request for Proposal (RFP). RFPs resulting from this RFI will include system-related information about specific circuits that are deemed overloaded, areas that may benefit from resiliency projects, zones that are best fit for DER deployment and deferral of upgrades within the distribution system.

To fully comprehend the information contained within a response to this RFI, LADWP may request further clarification in the form of verbal communication by telephone, written communication, electronic communication, presentation, interview, or by conducting a site visit at no cost to LADWP.
Responses should include information and recommendations of best practices of deploying a combination of large scale renewable energy (regionally) and/or DERs within LADWP’s service territory. All responses should be concise and focused. LADWP will use the information generated as a result of this RFI to determine a solution that is in the best interest of LADWP. This RFI shall not be construed as an RFP or an obligation on the part of LADWP. In addition, LADWP does not intend to award a contract on the basis of this request or otherwise pay for the requested information.

BACKGROUND:

LADWP is a utility that is created by and exists under The Charter of the City of Los Angeles. It is the largest municipal utility in the United States and serves approximately 4 million residents and 1.5 million registered customers. LADWP has more than 100 years of experience in the generation, transmission and distribution of electricity. The average annual energy consumption for the utility is approximately 26,657 GW-hours (July 2015 to June 2016) and its recorded peak demand is 6,502 Mega Watts (MW) as of August 31, 2017.

LADWP owns and operates three coastal thermal power plants in Southern California, namely, Haynes, Harbor, and Scattergood generating stations. Ten out of 25 generating units at these stations use ocean water for cooling known as Once-Through-Cooling (OTC) process. LADWP is required to eliminate the use of ocean water for cooling at those three coastal power plants by 2029 in accordance with the Federal Environmental Protection Agency Clean Water Act Section 316(b) and administered locally by the California State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB).

As part of the requirement to eliminate the use of ocean water for the ten impacted generating units by 2029, LADWP is looking to replace 1,662 MW of thermal generation capacity. LADWP will employ a combination of DER and/or large scale renewable energy resource solutions to achieve the replacement of the ten OTC units while maintaining the same level of system reliability.

The desired solution is to deploy DER and non-emitting resources with capacity equivalent to up to 60 percent of the existing thermal capacity (approximately 1000MW) by 2025 and the remaining portion to be implemented no later than 2029. It is important to note that the MW capacity of the renewable and/or DER solution is likely to be higher than the existing thermal MW capacity to reflect the non-linear relationship between DER and thermal capacity. In other words, to achieve the same level of system reliability, more MW of renewables and/or DER will more likely be required than the MW of OTC thermal units because of the lower capacity factor of renewables and/or DERs.

LADWP's distribution system does not have an electric model that enables system simulation and does not operate any distribution automation functions along its distribution feeders.
INFORMATION REQUESTED:

Please answer the following questions and provide information related to a combination of renewable energy (regionally) and/or DER solutions including other current and commercially-available technologies collectively referred to as the “Suggested Solution”:

1. Provide a general overview of your firm’s Suggested Solution.
2. Describe the process and the approach used to arrive to the Suggested Solution.
3. Provide a description of the Suggested Solution and its overall applicability to this RFI.
4. Describe the approach for forming the collaborative team that consists of various areas of expertise including utilization of other firms and partnerships that will be needed for developing the Suggested Solution.
5. Identify key advantages and features of your Suggested Solution systems.
6. Provide a description of how your renewable energy and/or DER systems can be integrated with existing distribution systems.
7. Identify any other system integration needed if the above system does not suffice.
8. Provide a summary of how your Suggested Solution meets the objective(s) of this RFI.
9. Provide general and high level project information – such as resource type, location, size (MW), existing/upgrade/new, and connection/delivery points.
10. Describe the ability of resources to provide various electricity products or services (e.g., capacity, energy, ramping, load following, regulation, etc.).
11. Describe how the Suggested Solution will include distributed resources that can be dispatched as stand-alone or in aggregate to meet the RFI’s objectives.
12. Describe how the Suggested Solution will achieve the desired solution of deploying DER and non-emitting resources with capacity equivalent to, up to 60 percent of the existing thermal capacity (approximately 1000MW) by 2025 and the remaining portion to be implemented no later than 2029.
13. Provide anticipated environmental attributes of the Suggested Solution.
14. Identify the scope and scale of specific electricity products and services required to meet this RFI, including any regional (large scale renewable energy solutions) or location-specific needs.
15. Provide an assessment of interconnection capability and any potential constraints.
16. Describe how resources under your Suggested Solution may be used or combined with other technologies.
17. Provide and describe any other new and emerging technologies that may be considered as potential Suggested Solutions as part of this RFI.
18. Identify any anticipated benefits to the broader electricity system or customers.

19. Provide a brief history of the Suggested Solution if it has been implemented before - including but not limited to, how long it has been in use.

20. Indicate whether the Suggested Solution has been implemented with a particular focus on other municipal utilities or other locations. Where available, provide references with contact information. If no references are available, explain why.

21. Describe how other implementations of the Suggested Solution similar or different in the locations described in the previous question from that Suggested for this RFI.

22. Describe the nature and results of implementation at other locations (i.e., schedules, how funded, costs, performance, length of service to date, measured results, etc.)

23. Describe how the Suggested Solution could be incorporated into the LADWP’s facilities or operations.

24. Identify what existing resources are required to implement the Suggested Solution.

25. Identify what regulatory requirements, permits, or related considerations are needed to implement the Suggested Solution.

26. Identify what operating considerations are necessary for the Suggested Solution to perform appropriately.

27. Describe the expected life of the Suggested Solution including what steps are necessary at the end of life (i.e., replacement, renovation, upgrade, etc.), and the expected costs.

28. Provide a timeline for project development to implement the Suggested Solution.

29. Describe how are results of implementing the Suggested Solution measured.

30. Provide, utilizing the answer to previous questions, what results should LADWP expect from implementing the Suggested Solution.

31. Provide cost benefit analysis, including the expected time frame for payback of the implementation costs via the benefits of the Suggested Solution.

32. Describe to what extent the results of the Suggested Solution can be guaranteed.

33. Provide all recommended safety procedures, including those related to fire, earthquake, and catastrophic failure for the Suggested Solution.

34. Indicate in the case of a fire, what are the potential health and safety impacts of the DER system.

35. Identify any other issues or considerations (e.g., new fire codes, other regulations, enhanced training, organization impacts, etc.) not otherwise covered that can assist LADWP in developing the requirements for the implementation of the Suggested Solution.
36. Provide a statement of understanding that the LADWP would be able to contact your firm for additional information or meetings including in-person interview, or presentation to further investigate the response to the RFI at no cost to LADWP.

37. Describe the expected maintenance procedures required to keep the assets in operation until the end of life of the Suggested Solution, including inspections, regular maintenance, component replacement, major overhauls, etc., and the estimated O&M costs.

SCHEDULE OF EVENTS AND CONTACT INFORMATION:

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Release of RFI</td>
<td>April 29, 2019</td>
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<tr>
<td>Deadline for Submitting RFI</td>
<td>June 14, 2019</td>
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All questions or concerns related to this RFI should be submitted via electronic mail to SCSPowerPurchasing@ladwp.com

USE OF INFORMATION

Participation in this RFI is optional and not required in order to respond to any subsequent procurement LADWP may take. The RFI is not a competitive solicitation method. Except as otherwise set forth herein, neither LADWP nor the interested party responding has any obligation under the RFI. LADWP anticipates to issue an RFP/RFPs using information gathered from responses to this RFI. Interested parties are encouraged to submit responses to all or part of the RFI even if they do not have a current intention to respond to any future requests. Respondents are specifically requested not to submit any type of price proposal other than high-level cost estimates for budget purposes.

All documents submitted in response to the RFI will become a matter of public record and shall be thereupon considered public records. If a respondent believes that any portion of its response is exempt from public disclosure, such portion shall be clearly marked “Trade Secret,” “Confidential,” or “Proprietary.” By submitting information with portions marked in this manner, the respondent represents that it has a good faith belief that such material is exempt from disclosure under the California Public Records Act, California Government Code §§ 6250, et. seq.

GENERAL INFORMATION AND INSTRUCTIONS

Companies responding to this RFI shall designate a single contact within that company for receipt of all subsequent information regarding this RFI. If subsequent bidding opportunities are issued, LADWP is under no obligation to advise any vendor responding to this RFI.

LADWP employs the City of Los Angeles – Business Assistance Virtual Network (LABAVN) website for posting its bidding opportunities. Vendors are advised to monitor the LABAVN website for such opportunities. Entities or individuals interested in such opportunities need to register on the LABAVN website. Registration is free and enables the registered entity or individual to gain access to certain information, services and/or materials maintained on LABAVN at no charge. Registration may be accomplished at: https://labavn.org.
CONTACT INFORMATION

Please provide your contact information including a brief company profile, and the name, phone number, and email of the key contact person(s).

RFI SUBMITTAL INSTRUCTIONS

Please submit your response via email to rfi@ladwp.com no later than June 14, 2019. Responses submitted via facsimile will not be accepted.