



Sullivan Solar Power

Leading the Solar Energy Revolution

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October 28th, 2016
(Via Hand Delivery)

City of San Diego, Purchasing & Contracting Department
1200 Third Avenue, Suite 200
San Diego, CA. 92101

Attn: Maureen Medvedyev, Principal Procurement Specialist
mmedvedyev@sandigo.gov

Re: Solutions to Support the City of San Diego's Goal of 100% Renewable Energy (RFI)

Mrs. Medvedyev,

Sullivan Solar Power is pleased to offer a response to the above referenced solicitation. On the following pages you will find descriptions for programs and funding that we believe will help the City achieve its Climate Action Plan goals.

Cover Sheet Information

Respondent Name: Sullivan Solar Power

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Website: www.SullivanSolarPower.com

Authorized Representative Name & Title: Quinn Laudenslager, Executive Vice President

Representative's Original Signature

Date Signed: 10-28-20-16

Overview of Solutions

The recommendations described below will meet the City's objectives of:

- Contributing to the City's 100 percent renewable electricity goal by 2035
- Providing an energy portfolio with lower carbon content than is currently provided, and lower than that required per California SB 350 and the State's Renewable Portfolio Standard
- Identifying new and diverse sources of renewable energy to supply electricity and/or reduce greenhouse gas emissions
- Ensuring reliable and sustainable energy services for both the near- and long-term
- Spurring new renewable energy development
- Following the State of California's loading order by considering energy efficiency, demand response, and other alternatives to generation for buildings in the City above levels currently achieved
- Considering social equity in efforts to reduce greenhouse gas emissions
- Increasing resources dedicated to local investment and economic development
- Creating green jobs in San Diego above levels currently achieved
- Are cost effective for the City and its communities, businesses and residents
- Consider the effects on the City's communities, businesses and residents
- Are innovative concepts and/or technologies
- Ensure long-term greenhouse gas reductions
- Minimize the use of renewable energy certificates (RECs)

Implementation Solution – Utilizing a Proven Process

We recommend modeling the procurement process after a proven program that was implemented by SDG&E for their "Sustainable Communities" program.

The Sustainable Communities Program was created in 2004 to advance and promote green buildings, energy efficiency and the use of clean energy generation technologies within the SDG&E service territory. The program was very successful, having completed 40 projects. These projects consisted of municipal buildings, schools, non-profit centers and commercial buildings. Having met its goals, the California Public Utilities Commission ordered the Sustainable Communities Program to be phased out.

The program process utilized a two-step process consisting of a shortlisting of contractors followed by competitive bidding amongst the approved group of contractors. Each project was design-build and evaluated on a best value basis. During the qualification stage, each contractor had to understand and agree to the program specifications laid out by SDG&E. They were also required to provide proof that they could meet the timeline and quality standards that the program set.

This program supports the City's renewable energy goals by ensuring that projects are successfully seen to fruition. One of the struggles of large programs is the ability of small contractors to provide high quality service. The model noted above reduces the risk of only having one contractor perform the work.

Costs associated with this process would include administrative resources throughout the duration of the project. A dedicated City project manager and City engineer would be required to develop and track the program status.

The potential participants are contractors working within the renewable energy industry, engineering firms, and both municipal finance and Power Purchase Agreement companies.

This program can be easily adopted for future projects.

The estimated results are only limited by the scope of work available.

Other Things to Consider

Contractors Getting Approved – It is critical that the participants involved have a proven track record of completing projects with the quality standards and schedule set forth in the program. Another extremely valuable asset is evaluating a contractor's future and past plans for supporting local initiatives. The City of San Diego's current process of qualifying contractors when coupled with an interview and investigation stage, will vet out all but the best local contractors.

The Bidding Process – The most important of a design-build project is setting a goal and encouraging the contractors to find creative ways to accomplish the stated goal. Providing enough information without overwhelming the participant is the first step in keeping a project on a tight timeline. Some examples of this would be energy offset goals, utility usage, roof structural plans, site electrical plans, and a coordinated site visit. During the site visit access to the electrical room, location of the array, and access to a facility person with knowledge of the site should be key objectives of the City to provide. An online portal with all updated information is the best way to disseminate information to the contractors. All RFI timelines, file downloads, and bid uploads will be managed by the portal.

Defining Best Value – Evaluation of the best value should consider the following things:

- Guarantees / Warranties
- Schedule
- Impact to the Site / Phasing
- Cost
- Adherence to the projects set goals
- Utilization of local people and products
- History of success with the proposed product or service (the latest thing may not be the best thing long term).

Finance Solution 1 – Municipal Financing

There are two ways the city can finance solar installations: a power purchase agreement (PPA) or a solar lease. We highly recommend a solar lease because the financing cost for a \$1 million solar installation over the system life is over \$1 million less than the cost of a PPA.

Here’s how the numbers compare over the 25-year system life:

Solar Lease versus PPA

	Solar Lease	PPA
Financing term	15 years	25 years
Buy-out at end of term	0	Fair market value
First year payment	\$7,072	\$6,825
Payments for first 15 years	\$1,460,000	\$1,415,000
Total payments	\$1,588,000	\$2,620,000

The solar lease is \$1,032,000 less expensive than a PPA over the 25-year life of the system.

The PPA costs about \$45,000 less over the first fifteen years, but it costs \$1,076,000 more over the remaining life.

PPA’s are widely used by government entities because the user has no financial obligation if the system doesn’t perform as projected. If the cost of a PPA and a solar

lease were similar, passing system performance risk to the PPA provider might make sense, but \$1 million is a huge premium for a nominal risk.

There is ample data that confirms that solar systems perform as projected – and frequently outperform projections. Even if the system were to only perform at 90% of projected output – the level warranted by module manufacturers, but unprecedented in our experience – the PPA cost would only drop by \$264,000, and the total PPA cost would still be \$768,000 more than the cost of a solar lease.

The city doesn't use PPA's to mitigate operating risk for HVAC systems or other equipment and there is no reason to do so for a solar system.

Finance Solution 2 – Power Purchase Agreement

The concept of a Power Purchase Agreement is simple in nature. Some of this is defined in the bullet points below along with some things to watch out for. One of the larger challenges for PPA's is the ability to finance large and small projects easily within a single fund. It is common for small scale projects where the benefit from solar is limited to be non-financeable or considered non-compliant. This can lead to a longer approval process if there are a large number of non-compliant projects.

- Solar PPAs are a widely utilized, highly financeable solution
- Enable the City to implement solar with zero capital outlay, and achieve net financial savings (after financing costs)
- Can be implemented for virtually any size project (provided a specific location is conducive to solar). (Down to \$100k per site, no upper limit)
- Pushes operational responsibility to financing/operating company
- City can retain all renewable energy credits, carbon credits, etc. (be sure to mandate this as part of financing)