



How to Write a Successful Solar RFP

Organizations can initiate a solar project in several ways. Many prefer to pursue direct negotiations, and some already have an established solar partner. However, if you choose to create a solar request for proposal (RFP), then developing the correct evaluation criteria for apples-to-apples comparisons is vital. A successful solar RFP needs to be both specific and flexible so that your organization can receive the most competitive range of bids. The following tips can help you to create the best possible solar RFP.

Assessing Company Goals

A successful solar project begins with knowing your organization's goals. Doing your due diligence to review brand, sustainability, environmental, cost reduction, and other goals is critical to developing an RFP that aligns with your organizational objectives and ultimately wins buy-in from key stakeholders.

In setting financial goals, it is important to establish clear valuations and standard metrics to allow for accurate comparisons. For instance, if the goal is to attain the greatest total system production, metrics should be expressed in kWh from all proposals. This alleviates confusion that might come if one proposal only discussed total installed watts and price-per-watt while another proposal showed total energy production and price-per-kWh.

Common ways to value a solar project include:

- Positive net present value (NPV)
- Internal rate of return (IRR)
- Lowest levelized cost of energy (LCOE)
- Greatest energy production

These goals and the following information can be used to create a solar RFP scorecard with company criteria and different weights, and that scorecard can allow for accurate, easy-to-read comparisons between proposals

Building an Internal Solar Team

Success in a solar project starts with partnering internally. Forming a team of experts helps to ensure that all essential subjects are addressed in developing an RFP. Since a solar project touches many topics, having experts from a number of departments is extremely helpful. It also ensures that solar is aligned with their departmental objectives. Departments to involve include:

- Finance
- Facilities
- Engineering
- Utilities
- Legal
- Procurement
- Risk Management

NPV Explanation

1. Accounts for differing solar technology and long term power production (kWh)
2. Captures all financial implications as they occur over time (usually 25 years for solar projects.)
3. Indicates the magnitude of value; projects with the greatest NPV indicate the greatest value
4. Avoids the risks of valuing projects based on gross price, price/kW, or first year PPA rate



How to Write a Successful Solar RFP

By issuing Requests for Information (RFI) to prospective solar partners and hosting meetings, organizations can obtain valuable feedback throughout the RFP development process. The purpose of an RFI is to help ensure that an overly restrictive or an extremely vague RFP is not created through lack of industry understanding. Restrictive RFPs reduce the number of proposals an organization will receive, and they can also result in proposals with unfeasible economics. Vague RFPs can generate a wider range of proposals that can make direct comparisons difficult.

Contracting with energy consultants can be a smart move as well. If needed expertise isn't available internally, an energy consultant can help make sense of solar power complexities so that the drafted RFP will elicit the best collection of proposals.

Critical Components of an Effective RFP

1. Goals & Objectives

As mentioned above, clearly defining organizational goals is crucial. That allows the focus of the RFP to be on outcome-based proposals, which align with organizational objectives. For example, if the goal is to generate the most energy in a constrained space, then solar partners will offer proposals aligned with that. If the goal is to achieve the greatest long-term NPV, then solar partners will target that objective.

2. Financial Requirements & Pricing

Financing can be complex, but there are numerous options that can meet organizational needs. Ultimately, you want an experienced solar partner with a strong financial backing and a proven project financing track record. To determine a solar partner's financing experience, you may request that this experience be expressed in megawatts of financed projects and partnerships within the financial community. You may also ask about the company's experiences with different ownership models. Since PPAs and leases are still relatively new financial mechanisms for solar power, you want to be sure that your solar partner has adequate experience setting them up.

Additionally, government incentive knowledge and utility policy awareness are crucial to creating strong economic returns. Asking the solar partner to explain what incentives are available and will be applied for the project is important as well as finding out if the solar partner will do this for you—most good ones will. It is also important to ask about how to achieve the best utility rate structures. Combined, these inquiries will quickly show the pretenders from the real players.

3. Company Qualifications, Licenses, & Experience

The solar industry has changed a lot in the last several years, and it is likely to continue to change as the industry matures. It's important to ensure that you have a partner that's going to be around for the long-term given that your project will last more than 20 years.

First, ask about company experience (years in business, total MWs of solar installed, etc.) to find out how long the company has been around and ascertain the likelihood that it'll continue to be in business. You may also inquire about what kind of financial backing they have. There are plenty of start-ups with good ideas, but they don't last long enough to back workmanship or panel warranties.

There are also a wide variety of installers, manufacturers, procurement companies, EPCs, and others in the solar power business. It's important to know what each company actually provides and what will be contracted out. With more companies involved, that typically requires more meetings and cross-coordination. It's why some organizations prefer to work with a vertically-integrated company who can provide a turnkey solution. In that scenario, there's only one point of contact, and it offers the potential for better quality control.

It's fairly standard to ask for profiles of senior management, project managers, and so forth in a solar RFP. Additionally, requesting company licenses, insurance, and bonding that are applicable to local regulations is important to make sure that you are working with a reputable company and to reduce any legal liabilities.



How to Write a Successful Solar RFP

4. Technology

By and large, the technology requirements section should be left relatively open so as not to be too restrictive. However, asking for detailed descriptions of technology and equipment is highly recommended so that it is clear as to what all the components are and who is providing them.

For instance, there are all kinds of different types of solar photovoltaic (PV) technologies from high-efficiency panels to lower efficiency thin films. Be sure to ask about what technology is being deployed and if multiple brands will be installed. Requesting a description of the solar cell is helpful because not all cells are created equally. Some cells use pasted on copper ribbons to conduct energy, and other manufacturer solar cells have a solid copper back for the entire cell. Differences such as these in manufacturing matter because the more cheaply built the cell (such as those with flimsy cell connections), the more likely the panel will fail and result in system energy losses.

Solar panel degradation rates and panel efficiency rates are two important numbers to request. Higher efficiency rates and lower degradation rates mean more system production. Additionally, the technology's total lifetime output is another important number to request as well as the total square feet the system will require. Keep in mind that regardless of the number of watts installed, it's kilowatt-hours that's the important number because it will show you how much utility energy you are offsetting by going solar.

5. Site Specifications

Be sure to share accurate information of the available sites for solar power so that solar partners can create the best proposals. Information to offer includes:

- a. Property-specific electricity usage data
- b. Property-specific electrical load and meter data
- c. Utility-specific rate data
- d. Roof orientation, age, condition, and idiosyncrasies (if interested in a roof system)
- e. Landscape and topography maps (if interested in a ground or carport system)
- f. Property-specific structural issues

It is also important to establish expectations for solar partner responsibilities such as:

- I. Who will manage site permitting?
- II. How will access to the site be provided for the solar partner and/or contractors?
- III. Who will perform utility interconnection?
- IV. Who will facilitate environmental studies and ensure compliance?

6. Operations and Maintenance (O&M) Services

While solar systems are highly reliable, O&M agreements ensure that the system remains at peak performance for decades to come. Comprehensive O&M services can ensure that someone is monitoring your system 24/7/365. The better the monitoring and simulation technologies are in tracking and forecasting output, the better the preventative maintenance will be in ensuring issues are addressed before failure results.

Some solar partners don't provide O&M services, so it is important to ask if O&M is contracted out or is actually provided by the solar partner. For those companies that do provide O&M, it's recommended to ask about how many megawatts of solar systems the company has monitored and what brands of solar panels with which the solar partner has experience. It's also important to ask how

How to Write a Successful Solar RFP

many O&M team members the solar partner has as well as the number of years of experience combined they have in monitoring solar systems.

7. Other Sections to Include

A solar system is supported by numerous agreements, warranties, and services. However, not all solar partners offer comprehensive services with a solar project. As mentioned in the O&M section, some of them contract out the work, so this is yet another area where it is important to request clarification on who will provide specific agreements and services. The following are several additional sections to include:

Roof integrity and warranties. Specifically for rooftop projects, it is important to know how roof warranties will be handled. A reputable solar partner will be able to obtain approval from parties overseeing the roof warranty so that the solar system will not damage the roof nor invalidate any existing warranties.

Performance guarantees (PeGu). Adding in a PeGu aligns the solar partner's interests with yours by offering upside bonuses if the system overproduces while giving you monetary compensation if it underperforms.

Product and workmanship warranties. It's standard for solar panels and workmanship to have warranties. Ask about the length of the warranties as well as the specifics of what each warranty covers.

References and related projects. It's standard procedure to ask for references from related solar projects so that you can get external opinions about working with a specific solar partner.

Added value services. In addition to all these services, some solar partners also offer public outreach, employee solar programs, and other services. Leave a section for this specifically and anything else the solar partner would like to share about their services. Some of the best solar partners aren't just putting a solar system on your building; they are seeking to be your energy partner for the next 25 years. These additional services are part of that long-term commitment to you.

A Clear Winner

With a clearly defined RFP, your organization can receive the best possible range of proposals. After reviewing them with the RFP scorecard, choosing the best solar solution should be clear. Then you can confidently move forward in partnering with a solar partner and installing the right solar system for your organization.

Additional Perspectives on Starting a Solar Project

Energy Efficiency & Renewable Energy. Procuring Solar Energy: A Guide for Federal Facilities Decision Makers. U.S. Department of Energy. September 2010. Accessed 22 March 2013.

<http://www.nrel.gov/docs/fy10osti/47854.pdf>.

The Solar Foundation. Steps to a Successful Solar Request for Proposal (RFP). Department of Energy. Accessed 22 March 2013.

http://thesolarfoundation.org/sites/thesolarfoundation.org/files/TSF_Steps%20to%20Successful%20Solar%20RFP_Final.pdf

