



The Benefits of Collaboration

The two initiatives profiled (TCSP and SV-REP) were designed to capture the benefits of increased scale, lead to rapid deployment of solar power and achieve lower costs for purchasers. These initiatives confirmed and provided a practical elaboration of the potential economies of scale in solar pricing, as previously described in technical literature.² Known benefits of collaboration include savings due to site aggregation, administrative cost savings, and favorable contract terms with their associated reduced risks. These benefits have been quantified to include the following results:

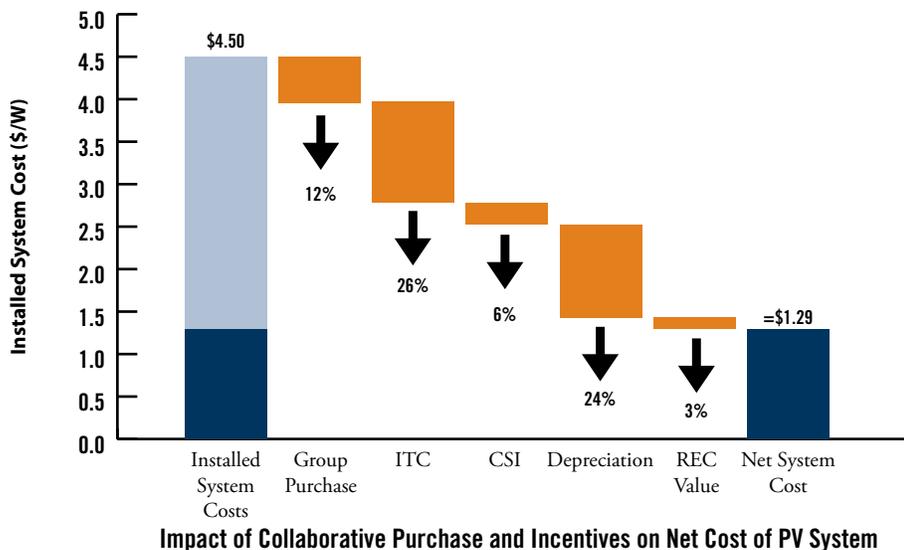
- an incremental 10 to 15 percent reduction of energy cost, compared to individual projects;
- transaction and administrative time reduced by 75 percent for collaborative participants; and
- highly competitive contract terms (buyout options, performance guarantees, termination options, etc.), compared to similar projects.³

Given that the two main barriers to deployment are high costs (both capital and transactional) and lack of experience with the industry, collaboration is an excellent solution to address both issues and achieve regional goals for solar installations. One additional benefit of collaborative purchasing is that it provides the organizations' internal champions (those who are first to raise the idea of solar purchasing and who often drive the initiatives forward) with a deeper pool of resources with which to make their case to internal decision makers.

Most prospective solar buyers are aware of the financial importance of solar incentives but are not familiar with the relative importance of collaborative purchasing. Figure 1 is an illustrative example describing the cost structure for a hypothetical solar PV system in California. Although costs for PV are expected to drop, \$4.50 per watt is within the observed range of commercial prices for individual solar PV systems today, assuming roughly \$1.70 for the actual panel cost and \$2.80 for the other equipment, installation, and development costs.⁴ The value of the investment tax credit (ITC), a federal tax credit for 30 percent of the upfront cost and federally allowed depreciation are crucial to making solar affordable with today's technology costs. Figure 1 also illustrates the collaborative purchasing discounts from strategically bundled sites.⁵ The value of the California Solar Initiative (CSI) rebate is shown solely for comparison since, as of January 2011, the

CSI funds had been exhausted and it is no longer available. The chart illustrates, however, that the CSI, when active, was less significant than the collaborative purchase benefit. Similarly, renewable energy credit (REC) values are uncertain because the markets where they are traded are immature at this time. However, in some areas (notably New Jersey and other states with mandatory Renewable Portfolio Standards) the REC value is much larger than the amount shown. The figure demonstrates that collaborative purchasing, while not as monetarily significant as the federal tax incentives, can help reduce solar PV costs to an affordable level. There are also numerous transaction costs for purchasing solar PV that do not appear in the \$4.50/watt figure because they are borne by the potential purchaser. These include, for example, staff time and legal fees. Collaborative purchasing can reduce such costs as well as overall project risks for buyers and investors.

Figure 1
Impact of Collaborative Purchase and Incentives on Net Cost of PV System



Source: World Resources Institute and Optony based on 2010 data in Northern California



Overview of Best Practices

Assembling a Team: Roles and Responsibilities

Four unique roles are required to execute a successful collaborative purchase. Figure 2 illustrates the suggested responsibilities associated with these roles. However, every initiative is different and some of the responsibilities recommended for each role below could be performed by another organization, while others are mutually exclusive. For example, the technical adviser should be independent of the participants and lead

organization so that it can provide objective counsel about maximizing benefits to the overall initiative. Identifying a convener is especially important in the early stages of a project to assist with recruitment and coordination. Thus, even if the collaborative purchase is initiated by a participant or lead organization, this guide recommends that they also identify a convening organization with which to partner.

Figure 2

Roles and Responsibilities in Collaborative Procurement



Convener: The convener should be a local organization with an interest in promoting renewable energy and/or economic development, with no direct financial interest in the initiative. Its responsibilities include education and outreach, sharing technical resources with participants, scheduling and coordinating stakeholders, and establishing a steering committee. The organization chosen needs to be credible and well-respected, and could be either a local government or nonprofit entity. It is important that the convener have a mission aligned with the goals of a collaborative solar purchase, and the time/resources to dedicate to its responsibilities throughout the duration of the effort. Good candidates can be sought in the following areas:

1. economic development and/or planning agencies and nongovernmental organizations;
2. environmental organizations with local presence and/or partners;
3. service organizations (e.g., AmeriCorps);
4. government agencies dealing with energy or the environment;
5. local chambers of commerce or industry associations;
6. academic or research institutions.

To raise the profile of the initiative in the region and tap resources from a larger support base, the convener should establish a **steering committee**. This local leadership team helps maintain the regional perspective and ties to additional participants and resources that will ensure success. Individuals who make up the leadership team can come from the potential participant pool, other regional organizations, or organizations that have prior experience with renewable energy procurement or regional collaboration.

Lead Organization: This organization is one of the purchasers, but also leads the procurement and negotiation process. The lead organization should have a strong commitment to purchasing solar energy and be driven to accomplish this mission with or without the collaborative group. The lead organization is willing to take the lead role because it understands the benefits of collaboration as having a positive impact on its own bottom line—including volume pricing, more favorable contract terms, project risk reduction, and faster deployment. The lead organization will issue the solicitation documents, access technical resources, engage with the convener, and act as the main point of contact

between the other participants and the vendors. In most cases, the convener will need to identify the lead organization during its early recruitment efforts.⁶

Participants: These are the members of the collaborative group with facilities and have an interest in purchasing solar power, but may or may not be committed to buying solar power at the outset. Due to time or resource constraints, participants might not be able to procure solar power on their own. As such, they are not candidates for lead organization, but their participation in the collaborative is crucial to achieving scale.

Technical Adviser: It is important to have an independent technical expert with resources and experience to support both the process and participants throughout the project. The technical adviser may be engaged by the convener, the lead organization, and/or the participants. The function of this role depends somewhat on the complexity and number of sites, financing options, and aggregation strategy. The technical adviser advises the participants, incorporates solar vendor input into the bidding process and timeline, performs feasibility assessments, supports the procurement and evaluation processes, technically evaluates optimal groups of sites to bid out together, and provides expertise across the life cycle of solar purchasing to maximize PV deployment and the initiative's impact. Therefore, the technical adviser must be independent of any purchasing party, potential bidders, or industry representatives.

The technical adviser should have as many of the following capabilities as possible:

- in-depth experience with solar technologies and market drivers
- a solar design and project management team
- strong expertise in solar optimization for technical and economic results
- successful solar technology procurement with financing, especially via public solicitation
- experience working within the participant pool (e.g., with the public or private sectors)
- prior experience with portfolio/group assessments and purchases.



The 12-Step Process: Best Practices Summary

This set of best practices is intended to be a resource for project planning and decision making for potential conveners, participants, lead organizations, and technical advisers. They provide specific actions in chronological order, with milestones to indicate when to move from

one step to the next. The end goal is that, by the end of the process outlined in Figure 3, participants in a regional group will have solar PV installed on their facilities at an affordable price.

Figure 3
Overview of Best Practices

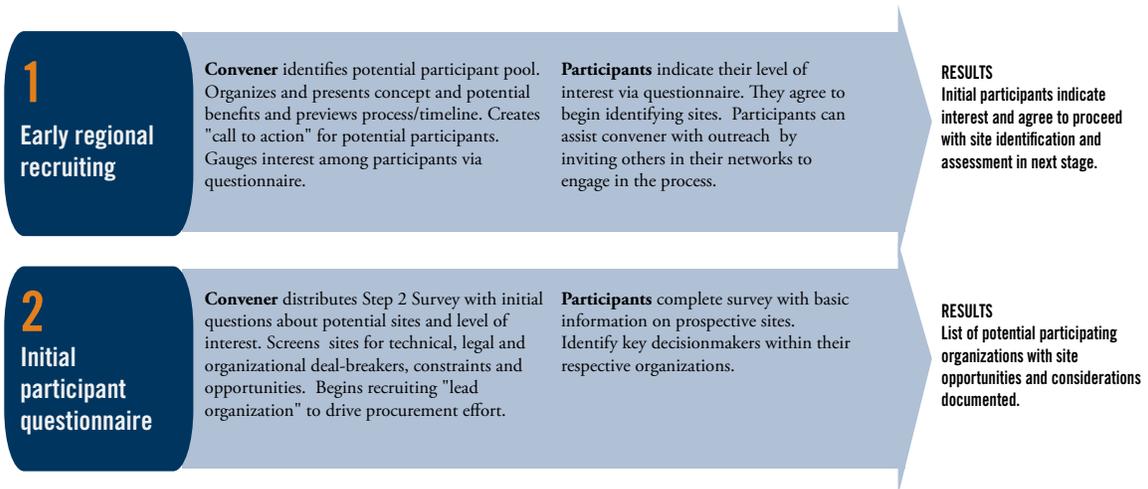


Figure 3
Overview of Best Practices (continued)

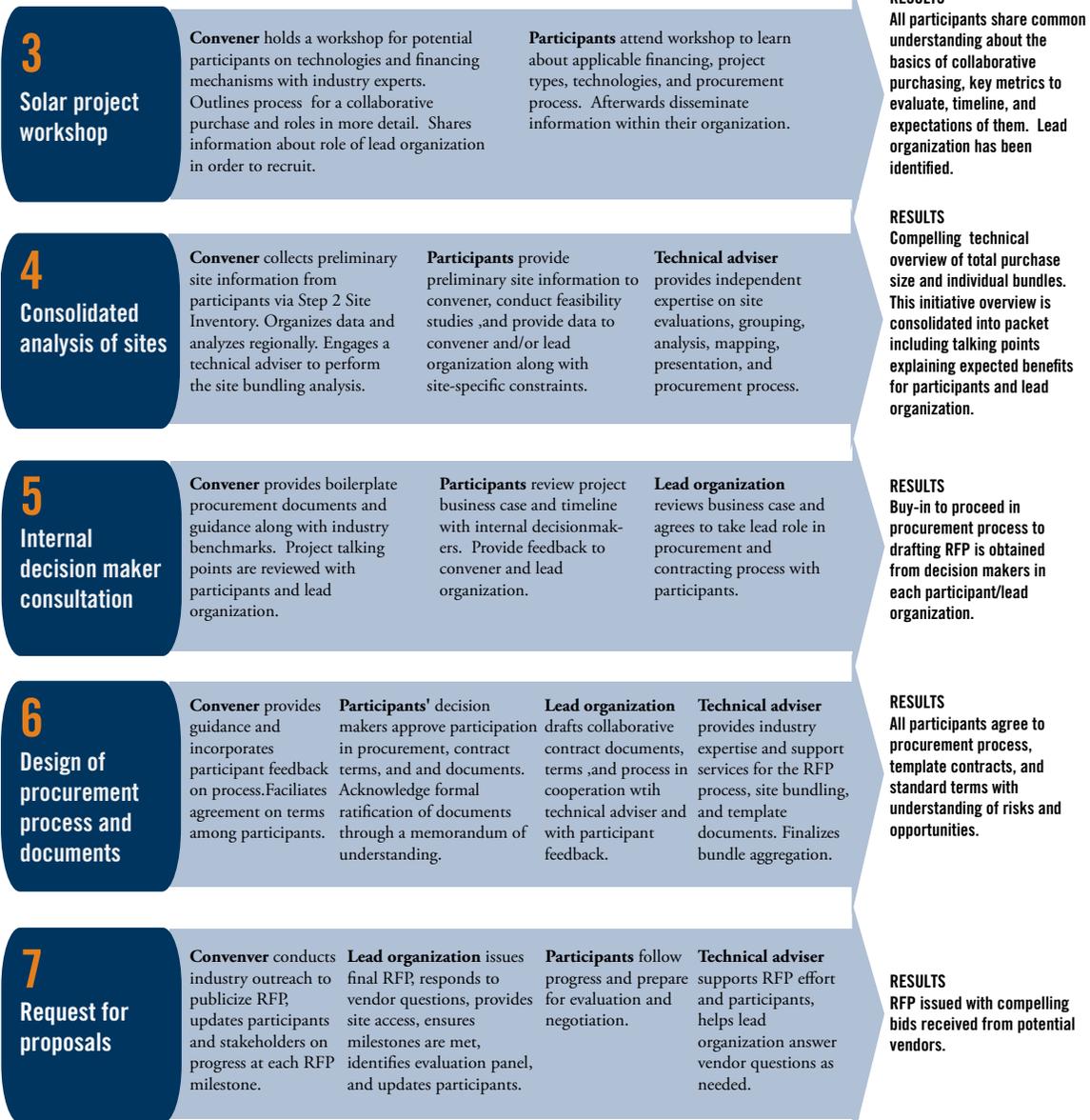


Figure 3
Overview of Best Practices (continued)

