Solar Aggregation: Commercial and Industrial Sectors
Background

Concept

Develop a program to provide strategic assistance to groups of commercial and industrial customers interested in aggregated procurement of solar electricity.

Background

Solar deployment can be expedited when customers team up to purchase in groups. Costs are reduced through a variety of mechanisms:

- Developers avoid significant customer acquisition expenses;
- Construction scheduling at multiple sites can be streamlined;
- Equipment can be purchased in bulk;
- The larger pool of customers can entice more competitive bids.

If an aggregation program is structured well, there can be significant reductions in the administrative burden on individual purchasers. As the requirements for participation are minimized, more customers will opt to join in; further increasing the magnitude of the purchase and the attractiveness of the overall project to potential bidders.

There are several successful examples of government and residential utility customers benefitting from group purchases of electricity from on-site photovoltaic systems. Cities and counties in Silicon Valley joined together for a 14 MW purchase on 70 sites, resulting in $60 million in economic development and 300 jobs. A similar effort in Washington DC is underway, and a recent solicitation in Alameda County covered a 30 MW purchase on 180 sites. The federal government is embarking on a pilot multi-agency effort in Northern California. At the residential level, Solarize Mass helps homeowners access tiered pricing schedules, where greater participation results in lower customer costs.

Commercial and Industrial Sectors

Non-government commercial and industrial utility customers have had limited experience with solar aggregation to date. Yet these sectors offer significant advantages in supporting rapid solar deployment (e.g., large on-site loads, greater procurement flexibility). A streamlined aggregation program, building from successful components of past efforts and focused on quicker, higher impact projects, can be developed with relatively low resource investments.

Key Considerations

Time. Past efforts, largely because they were so innovative at the time, were quite prolonged. Each step required thoughtful consideration by the large pool of participants. There are many opportunities to streamline, e.g., developing templates for RFP and contract documents based on readily available models prior to the assembly of the aggregation group.

Site Assessments. Good quality technical and financial assessments of potential PV locations allow participants to understand whether projects may be viable, and identify issues that should be resolved before projects are included in a bid solicitation. To expedite the aggregation process, the site assessment process should be defined up front, including: who will conduct the work, the scope of the evaluations, and the funding source. Site assessments can be standardized using best practices from other aggregation efforts.

Administrative Costs. Estimates for the cost of program support (for financial, technical, legal, and convening services) vary greatly among existing aggregation efforts. Many of the opportunities for expediting the aggregation process should have the co-benefit of keeping program costs to a minimum.

Participant Commitment. Executive level commitment to participate in the project should be demonstrated at an early stage. Group members must be capable and willing to make timely decisions, adhere to schedules, and implement viable PV projects.

Long Term Viability. Aggregation projects should yield cost savings for their participants. The program can be structured to ensure that the modest program administration expenses (e.g., site assessment costs) are reimbursed, perhaps to a revolving fund, once the procurement is executed. This will enable additional aggregation efforts to move forward without further government subsidies. In addition, colleges and universities may have interest in supporting site assessments as a component of their clean energy curricula.

Proposed Path Forward

1) Secure convener, technical expertise
2) Develop draft RFP, model contract documents utilizing existing NREL and other examples
3) Solicit interest from viable commercial and industrial groups to participate in aggregation projects
4) Selected group(s):
    - Conduct site assessments
    - Finalize and issue RFP, receive bids, and select solar developer(s)
    - Finalize contracts and commence construction