

HERE COMES THE SUN...(OR IT'S NOT EASY BEING GREEN)

BY DAN WILES, PRINCIPAL

At the intersection of economics and “green thinking” governments find the catalyst for implementing solar energy as a source to generate electricity. There is a reasonable basis to expect that when compared to the cost of coal or gas-generated electricity from investor-owned utilities, a solar generation system can generate present value savings and that pricing competition between solar project developers can increase those savings. The best application of this expectation occurs when the solar equipment is installed on property already owned by the government. This means that the only real additional cost is that of the equipment itself. Often we see this manifest when we have reviewed solar projects that generate a portion of power for utilities, such as water or wastewater treatment plants.

The goal of the solar project is fundamental - reduce electricity costs by more than the cost to acquire the project. While there are a number of different types of solar energy generators, for this type of small scale project, the primary vehicle is the photovoltaic cell. There are three basic methods to finance the acquisition of solar generated power:

1. Direct Purchase,
2. Lease Option, and
3. Power Purchase Agreement.

Direct Purchase involves purchasing equipment from a provider. There is a capital cost upfront, either through the issuance of debt or through the use of funds on hand. You own it, if it wears out, is damaged or becomes obsolete, you have the risks. Feasibility of the project means simply that the cost of the equipment, including the opportunity cost on investment of funds (or the financing cost) is less than the potential savings from avoided energy costs. We should note that there are federal incentives to financing solar projects, such as Clean Renewable Energy Bonds and Qualified Energy Conservation Bonds, both of which involve direct federal subsidy of the interest costs.

Lease Option typically involves leasing the solar project from a provider for about 10 years with the option to buy the project at the end of the lease. This can allow the lessor to gain the value of federal investment tax credits for the equipment. At the end of the lease term, you could then either finance the project through internal funding or by issuing tax-exempt bonds.

A Power Purchase Agreement is an agreement to purchase power from a privately built solar project for a designated time at a designated price. A Power Purchase Agreement makes future energy costs predictable and reduces technology and obsolescence risk.

For our water district clients the Power Purchase Agreement option has demonstrated several advantages over the Direct Purchase and Lease Option alternatives. PPAs require smaller upfront out-of-pocket expense and negate interest expense on borrowed construction funds. Agency reserves and future investment opportunities remain undisturbed.

Every agency's situation is different with unique financial and energy circumstances. Moreover, the costs and tax attributes relating to solar energy equipment have been changing and involve provisions subject to change, sunset or extension. For now, the Power Purchase Agreement format seems to provide the largest savings and the least intrusion on the agency's business. However, that conclusion is dependent on the facts and circumstances and on the prevailing tax treatment. ♦

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