

# The Top 7 Solar Financing Mistakes and How to Avoid Them

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*In mid-April (right before Earth Day), I was in New York City when the major utility there announced that it would work with solar developers toward a more modern electrical grid. Although this progressive policy is not “universal” across the nation, it is clear to me that more solar is going to get installed and considering the financing options upfront is very important. This article will help you avoid common mistakes when choosing payment options for solar. I want to thank Lance Weislak for contributing most of this information. Lance Weislak is an investment banker at Wulff, Hansen & Co.. He can be reached at [lance@wulffhansen.com](mailto:lance@wulffhansen.com).*

When implementing solar programs, facility owners frequently spend the majority of their time debating and discussing the physical attributes of a program: how many megawatts of solar will be installed and so forth. The actual financing of the project is considered an afterthought and is often decided upon only at the very last minute — and may be dictated by the vendor. This is a mistake because the project’s financing can dramatically affect the program’s success. The 7 most common energy-project financing mistakes are listed below.

**1. Using Inflated Utility Escalation Rates.** Savings calculations are projections that are highly dependent on estimated utility rate increases. Any project can be made to look good by using aggressive escalation assumptions. However, if rates increase by less than the assumption, savings could be substantially diminished. So do your best to evaluate whether the proposed escalation rates are realistic (you can look back at your billing history and even review your utility’s press releases to see if they forecast higher electric rates). You should run project economics under a variety of rate escalation scenarios: high, middle and low.



## **2. Not Considering Solar Alternatives: Power Purchase Agreement Versus**

**Ownership.** Solar financing should be considered separately because solar can either be owned outright or “rented” under a Power Purchase Agreement (PPA). The PPA option allows you to lock in steady and potentially inexpensive electricity rates for 20 to 25 years and is (indirectly) subsidized by a 30 percent Federal Investment Tax Credit and accelerated depreciation; there may also be substantial state incentives (which may also suddenly disappear). Operations, maintenance and system upkeep are the responsibility of the system owner. With a PPA, you pay only for the electricity the system produces so all system risk is shifted to the owner. On the other hand, solar systems are fairly easy to maintain and don’t have much risk associated with them. Owning yours holds the potential for (nearly) free electricity once the system is paid off. Consider both carefully as they have very different pros and cons.

**3. Not Understanding the Savings Warranty/Guarantee.** The guarantee is a large part of the value a solar company brings to the table, so ask questions until you understand it. Some companies even promise to write a check if savings don’t materialize. Don’t confuse your guarantee with the performance bond that insures construction, because they are entirely separate. Make sure you understand exactly what is being warranted (actual dollars or electricity savings or production?) and by whom. Is the guarantee the responsibility of the company or the equipment manufacturer? For how long? What happens if the company is sold or goes bankrupt — what rights do you have? In what ways can the company make good on its warranty/guarantee? Furthermore, a warranty or guarantee is only as good as the company providing it. Does it have the operational and financial strength to stand behind its promises? You should examine a company’s track record, claims history and audited financial statements before you sign on the dotted line.

**4. Not Factoring in Operation and Maintenance Costs.** To generate the savings projected, systems and equipment must be maintained. Even solar systems require maintenance — inverters need to be replaced every 10 to 15 years, panels need to be washed regularly and so forth. Maintenance can be performed by external companies or by existing staff, but someone must pay the costs. These costs need to be included in the project economics.

**5. Not Conducting a Competitive Process.** Many facility managers wouldn’t even consider purchasing goods or services without first conducting some type of competitive process, yet sometimes these same facility managers eagerly accept the first energy-



financing package presented to them. You almost always get a better financing package by employing a competitive process. I've seen dramatic differences in interest rates offered to similar clients for a similar project by the same bank. The only difference was that one borrower obtained unbiased third-party financial advice and used a competitive process while the other one did not. Even small differences in interest rates can have a major impact over time. For example, a 20 basis point difference in a \$10 million financing over 15 years equates to \$300,000 in additional interest cost.

**6. Making a Financing Decision Based Solely on the Interest Rate.** The interest rate might not be the most important criteria when it comes to financing. You need to closely examine the terms and conditions. For example, some proposals may include all transaction fees while others do not. Similarly, one bank may accept a "validity" opinion from your own counsel while another may specify an expensive external counsel. Prepayment terms can often have a dramatic impact on overall value: One proposal may allow for prepayment at any time; one may prohibit repayment; and another may allow for repayment with a substantial penalty or premium. Prepayment options are especially significant if you need financial flexibility in the future. Similarly, sometimes a lender will require the borrower to pledge an asset in order to obtain financing. Pledging an asset may be necessary; however, a mistake here can have dramatic negative consequences down the road and reduce your future financial flexibility. The impact of financing terms and conditions can be enormous, so look before you automatically leap at the lowest nominal interest rate, and be sure you're comparing apples to apples.

**7. Ignoring Low-Cost and Subsidized Financing.** Numerous federal and state programs offer very attractive financing for green projects. At the federal level, both Qualified Energy Conservation Bonds (QECBs) and Clean Renewable Energy Bonds (CREBs) offer long-term financing (more than 20 years) at rates typically less than 2 percent and sometimes less than 1 percent. The actual rate depends on your credit. At the state level, there are several programs that can offer both zero percent and 1 percent loans for smaller projects. Cost-free grants may also be available. Don't count on your vendor to identify these for you... explore these sources first and then fill in any gaps with traditional methods.

**All of the above** mistakes can be easily avoided if you ask about the financing early in project development. Evaluate and consider multiple alternatives. If you need to bring in outside expertise, don't hesitate to do so. Invite a member of your Finance Department to be a part of the project team. And be sure to shop around for the best overall financing



package. Finally, don't be afraid to ask "stupid" or "obvious" questions about the financing. Financing is an important component of making your project a success.

