# Who Pays When Solar Modules Fail?

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With so many new companies entering into and competing in the renewable energy marketplace, how do the parties ensure that key components of a solar generation facility perform as intended? Rigorous commissioning and performance testing might address immediate issues. But what happens in later years when photovoltaic modules do not meet performance expectations or the inverter fails? What happens when a developer or contractor obtains modules from an inexpensive overseas supplier and the modules degrade more quickly than projected? What good is a warranty from a company that will not be around in a decade to respond to a claim? What remedies exist when key components fail to perform as intended? Is there insurance available to respond to these risks? This article attempts to address these questions in the context of a solar generation facility.

***Where do you look when a key component fails?***

When a component fails, parties often turn to the transaction documents to see who is responsible. Of course, not every party in a transaction is itself a party to each such document, so different players will look in different places. A common menu of major agreements for a solar project may include:

- a Power Purchase Agreement ("PPA") under which the developer agrees to install and maintain the generation facility and the off-taker agrees to buy the electrical output;
- a Site Lease Agreement under which the site host (which may or may not be the off-taker) gives the developer rights to install, own and operate the facility at the project site;
- an Engineering, Procurement & Construction Agreement ("EPC Agreement") under which the developer hires a contractor (the "EPC Contractor") for the design, materials and construction services necessary to provide a turnkey facility; and
- an Operations and Maintenance Agreement ("O&M Agreement") under which the developer hires a contractor (which may or may not also be the EPC Contractor) to provide long-term maintenance services for the facility.

However, with all of the agreements that are typically executed in connection with a solar project, it can be confusing to figure out who is actually standing behind key components. Moreover, the parties and agreements described above may not themselves provide adequate performance assurance for such components. The practical answer for determining who ultimately bears responsibility often involves one or more of the following:

## Manufacturer Warranties

In many cases, the parties may ultimately rely on "pass-through" warranties provided by the manufacturers to the owner of the facility or to the off-taker. There are significant differences in typical express warranties provided by manufacturers of photovoltaic modules and inverters. For example, some modules are warranted for one year. Others are warranted for up to 25 years, with an allowance for performance degradation over time. Manufacturer warranties typically exclude defects caused by failing to properly maintain the products or acts of god, limit liability for consequential damages, and disclaim implied warranties. Some manufacturers give themselves absolute discretion to determine whether their product is defective or provide that their warranty is governed by the laws of the country where the product was manufactured. In many cases, the manufacturers will limit their liability to replacement of the defective product, but not for the inconvenience and cost of re-installing the modules in the facility, or lost power generation during downtime. Thus, just because a manufacturer performs under its warranty does not mean that various parties will be made whole.

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One important issue to consider when drafting agreements is that most jurisdictions require privity of contract to enforce a warranty. This means that the party seeking to enforce the warranty must have purchased the product directly from the manufacturer, unless it is found to be an intended beneficiary. Generally, a party can avoid privity problems with careful drafting and by obtaining an assignment of the warranty at the time of purchase or installation.

Of course, another concern is the credit of the manufacturer. This is a particularly important issue in the rapidly expanding supplier base for photovoltaic modules. If the manufacturer is no longer in business when a performance problem arises, then the warranty may be worthless. Similarly, if the manufacturer is located overseas and does not respond or denies the claim, then there may be problems in enforcing the warranty in the United States. All of these issues need to be considered when selecting vendors for key components.

### Guaranties Under the EPC Agreement

Increasingly, developers that offer performance assurances to the off-taker under a PPA turn around and pass along their exposure to the EPC Contractor under the EPC Agreement. However, such assurances often have their limits. For example, a performance guaranty from the EPC Contractor may provide assurances that the system, as designed, will perform as intended. But such guaranties may not ensure performance of the modules or inverters themselves. Also, there may be disagreement about whether another warranty exclusion applies, such as a failure to properly maintain the equipment. If the contractor under the EPC Agreement and the O&M Agreement are the same, this particular concern is less of an issue as the same party would be responsible for design, procurement, installation, and maintenance.

Of course, as with the manufacturer warranties discussed above, performance assurances under an EPC Agreement are only as strong as the credit of the EPC Contractor standing behind them. Thus, the track record and financial strength of the EPC Contractor is another important factor to consider in the vendor selection process.

### Third Party Insurance

As the solar market expands, another solution is becoming more widely available for those who want to limit their exposure to product failures. In particular, third party warranty insurance may be available to reduce or eliminate risk, albeit with added cost. The typical installation, property and liability policies obtained by a developer or contractor do not provide warranty coverage. However, a few insurers in the marketplace now offer specific warranty insurance policies. For example, one insurer is willing to give a 25-year guaranty that modules will perform to 90% capacity in the first ten years, and 80% for the remaining 15 years. However, this guaranty is also only available with respect to modules made by a limited set of manufacturers approved by the insurer, reinforcing the importance of vendor selection for key components.

### Conclusion

The considerations discussed above are just a starting place, and the alternatives available for any specific project will differ. Future problems can often be avoided or mitigated by addressing them early in the project development lifecycle. As a result, parties involved in solar projects are well advised to seek good legal counsel to help negotiate the web of project agreements and evaluate available warranties and performance assurances.