

Making solar projects bankable

Create added value
for customers



Reducing risks requires certainties

More and more parties discover that investing in PV-projects can be lucrative. Nevertheless, the eventual return on investment depends on many factors. Investors are therefore committed to solid agreements with suppliers / manufacturers of essential materials, such as panels, converters and mounting systems, which absolutely have to be high quality. Manufacturers understand this very well and therefore often provide long-term product guarantees and / or performance output warranties to reassure their customers.

However, practice shows that investors and financiers demand greater certainty as to the proper functioning of the chosen materials. Without explicit guarantees, these parties simply will not participate.

For example, investors and financiers want to know on which criteria the choice of a manufacturer is based and how the quality of its products is ensured. How reliable are factory guarantees in this regard? Will the manufacturer be able to also meet his warranty obligations in the future? What materials and costs are covered by factory guarantees and which are not? Are these guarantees elsewhere insured and if so, is it at factory or project level? What are the exclusions in the policy terms of the reinsurance agreement? Is the policy limited and if so, does it apply at factory or project level? What is the chance that I will not be paid as an investor in case of a warranty claim? Does the insurance remain in force in case of bankruptcy of the manufacturer? Is there a deductible?



Without explicit guarantees, investors simply will not participate





*Confidence cannot
be imposed;
it has to be
earned*

Whatever the quality of a product, if for some reason it malfunctions or even entirely fails, this definitely will affect the revenues for the investor, possibly with adverse financing consequences. So the question is how to provide security to investors and financiers regarding the overall quality of products and compliance of warranty conditions, even in case the manufacturer unexpectedly would cease to exist.

The answer lays in combining quality inspections, assuring that the product has been manufactured according to the highest quality standards, together with Solarif's unique, multi configurable insurance packages, covering manufacturers warranties, inherent defects and even performance guaranties, thus providing fundamental certainties to investors and financiers.





Solarif Risk Management

Solarif Risk Management developed a certification program for panels to become Solarif certified. Through this program a particular panel, produced in a specific plant, becomes Solarif certified subject to a positive outcome of a factory risk assessment or an inline, batch level quality inspection during production.

Solarif-certified products provide certainty and clarity for all concerned when it comes to quality. Clients who have bought Solarif certified panels are given the possibility of purchasing the Inherent defect coverage in addition to Solarif's Operational all risk insurance against a fixed low premium.

Damage caused by inherent defect is covered, even in case of bankruptcy of the manufacturer

Solarif Insurance

As an independent, specialized insurance agent, Solarif Insurance has a vast knowledge of the various internationally available warranty insurance products. Based on the requirements of investors and financiers of specific PV-projects, Solarif Insurance can assist in choosing the right warranty insurance product. Only when these parties are satisfied, funds will be released to realize projects, after which sales opportunities can actually be converted into transactions. No money, no project. No project, no sale.

In order to substantially increase the bankability of a panel and/or PV-project, it is therefore essential to exactly understand what certainties the investor and financier require, related to warranties. Solarif Insurance can make these demands insightful. Subsequently Solarif Insurance can advise the guarantee insurance product that best meets the requirements.

After agreement with the investor and financier, Solarif Insurance can arrange the chosen warranty insurance.



Inherent defect coverage

An inherent defect means damage, caused by the nature or a defect of the product itself instead of being caused by an external event or environmental circumstances. Examples of such defects concerning panels are delamination, poor soldering and short circuit in the junction box.

The inherent defect coverage provides protection in the following situations.

1. Warranty claim is met by manufacturer

Here, the inherent defect coverage provides an additional guarantee, in which case the manufacturer will provide a new product, according to factory warranty, while the inherent defect coverage compensates for any consequential damage, if not covered by factory warranty. These may include costs for labour and transport, but also for possible production losses.

2. Bankruptcy manufacturer

In the event of an unexpected bankruptcy of the manufacturer, full coverage for damage due to inherent defect (insolvency cover) applies. In addition to any consequential damage and production losses, the defective products themselves will be compensated as well.



In both situations, the inherent defect coverage, after settlement of the claim, will be continued.

The inherent defect coverage eliminates substantial risks, making investment in a PV-project as a whole considerably more attractive. After all, the installation is better protected while the returns are secured. Either way, the risk of unexpected costs and loss of production due to a defective panel is covered, even in the event of bankruptcy of the manufacturer. As a result, financiers will be prepared more often to finance a project, probably even at a lower interest rate.



The Solarif certification program offers the following significant benefits.

Manufacturer

- ☑ Your customers are given the possibility of external coverage of factory guarantees;
- ☑ Any customer may arrange his own inherent defect coverage, including insolvency cover (insured warranty);
- ☑ An insured warranty is fully paid by the customer;
- ☑ Certification includes a relevant quality mark;
- ☑ Certification contributes to a positive corporate image, resulting in a competitive advantage
- ☑ All Solarif business divisions advise their customers to use Solarif certified panels only;
- ☑ You are eligible for tenders or supplier selections where external coverage of factory guarantees are mandatory;
- ☑ Certification helps you optimizing your internal processes, whilst providing the management an effective tool for quality control and evaluation;
- ☑ Any (technical) problems are located and identified at an early stage, so forehand action can be taken to prevent future errors;
- ☑ Customer satisfaction will increase due to focusing on quality;
- ☑ Solarif-certification, combined with the associated inherent defect coverage, strengthens customer confidence, increases project bankability and thus will raise your sales!

Owner / Developer / Investor

- ☑ You are given the possibility of external coverage of factory guarantees; i.e. Performance Warranty Insurance and/or PV System Output Insurance and/or Inherent defect coverage;
- ☑ You may arrange your own inherent defect coverage, including insolvency cover (insured warranty);
- ☑ Certification includes a relevant quality mark
- ☑ You are eligible for tenders or supplier selections where external coverage of factory guarantees are mandatory;
- ☑ Any (technical) problems are located and identified at an early stage, i.e during production, so forehand action can be taken to prevent future errors;
- ☑ Solarif-certification, combined with the associated inherent defect coverage in addition to the Operational All Risk insurance, increases project bankability and creates added value to the owner of the system/installation.



***Certification
helps optimizing
your internal
processes***



**Customer
satisfaction will
increase due to
focusing on
quality**

Assessments / Inspections

Inline quality inspection

DuPro (during production)

- BOM vs CDF conformity cross check
- Visual inspection
- Thermal inspection
- I-V data measurement
- 100% EL imaging data review
- Production monitoring

A Financial Due Diligence will *not* be required for this procedure.

Factory Risk Assessment

Technical Due Diligence

- Company profile
- Product/Factory/System Certifications & implementation
- Quality Assurance, Quality Control

Financial Due Diligence

- Assessing the risk of default within the current/next year

Panel manufacturers

After factory certification, Solarif offers the manufacturer an exclusive information / promotion package, including

- A certificate of approval;
- The Solarif-certified Logo, which can be used in both online and print media to promote certified products;
- A draft text to inform new and existing relationships;
- A press release that can be personalized;
- A promotional draft for your website;
- Listing on the Solarif website under 'certified manufacturers';
- An information package for your customers, explaining the Solarif insurance solutions.

If desired, account managers can be trained by Solarif in how to effectively using the Solarif certification as an added value in sales.



Solarif Insurance - *listen, analyse, advise, arrange, place, manage*

Solarif Insurance helps you protecting your investments and securing your returns by arranging, managing and delivering customised insurances for all your PV-projects.

- core activities
- advice and consultancy
 - arranging and placement



Solarif Matchmaker - *sell, buy, offer, request, conclude*

Solarif Matchmaker provides professional matching services in order to increase valuable business opportunities for project buyers and sellers, EPC contractors and debt providers.

- core activities
- support selling/buying PV-projects
 - support selling/sourcing bankable EPC contracts
 - support acquiring corporate PPA's



Solarif Risk Management - *inspect, find, reduce*

Solarif Risk Management regulates and performs factory risk assessments for panel manufacturers willing to become Solarif-certified and performs inline, batch level quality inspection during production. Furthermore Solarif Risk Management performs drone inspections of solar panels, including analysis of the data obtained.

- core activities
- factory risk assessment (to become Solarif-certified)
 - inline quality inspection
 - pre-shipment inspection
 - post shipment inspection
 - drone inspections, including data analysis
 - on-site EL inspection



Solarif Project Finance - *listen, analyse, advise*

Solarif Project Finance helps structuring, analysing and assessing PV-projects and arranges project finance or refinance.

- core activities
- structure, analyse, assess
 - arranging project finance
 - consultancy

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