



# PROJECT FINANCING OF WIND AND RENEWABLE ENERGY

## Introduction to Wind and Renewable Energy and Project Financing Concept

**Demand for renewable forms of energy is growing rapidly around the world, with wind power leading this global trend in most regions. In this article we introduce the concept of Project Financing, and highlight current trends along with the implications of such a financing solution.**

Project financing is a common option for medium to large scale capital intensive projects, with well understood cashflows. A common definition is

**“A financing of a particular economic unit in which a lender is satisfied to look at the cashflows of that unit as the source of funds from which a loan will be repaid and the assets of the economic unit are used as collateral for the loan.”**

The main distinction between a corporate finance “CF” and a project finance “PF” structure is that rather than using the parent company’s balance sheet as collateral for a debt facility, a standalone legal entity is set up called a Special Purpose Vehicle “SPV”. This “SPV” owns and operates the asset, and is also held accountable for all liabilities.

The concept of project financing can be summed up as a non or limited recourse structure, with limited liability for the sponsor (owner or parent company). This implies that if a project would default on its terms and conditions to a lender, then the main balance sheet of the sponsor would not be available as a source of funds for settlement.

## The Main Advantage of Project Finance

One of the main benefits for larger corporations using a PF structure as opposed to CF is that a PF structure will generally allow the sponsor to set up multiple standalone units, with limited effect on capital, gearing and other imposed balance sheet restrictions, as well as the credit rating of the parent company.

## The Main Drawback

One of the main drawbacks of this financing structure is that the limited recourse comes at the price of generally longer transaction times, and the need to hedge prices and thus revenue at a level that will satisfy the requirements of lenders during the life of the loan.

In other words, the banks will take a very conservative view when they analyse a project’s debt service ability. This is to ensure that they will be repaid, even in the most conservative scenarios of revenue projections.

## The Risks

Project Financing is all about identifying risks, allocating them appropriately, and ensuring that the responsible parties are adequately incentivised to manage their risks efficiently. With often billions of dollars on the line, multiple parties involved (including sponsors, contractors, suppliers, host governments and global financiers), it is no surprise that from the inception of an idea to financial close, a project finance deal can take years to negotiate. Some of the risks usually considered are:

- Construction time, costs and specification;
- Operational cost, reliability;
- Supply reliability, quality, cost;
- Off-take volume, price;
- Political environment, war, local hostility, currency inconvertibility;
- Labour quality, availability;
- Socio-environmental responsibilities;
- Legal, documentary and tax risk;
- Modelling and analytical risk;
- Macroeconomic risk.

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- Project Finance Modelling (A)
- Project Finance Modelling (B)
- Debt Modelling Masterclass
- VBA for Financiers

## Financing and Technical Requirements

For a PF structure in wind power assets we would expect to see an array of different financing and technical requirements, such as:

- Project Structure - Entity capabilities;
- Power Purchase Agreement - Wind resource, grid connection;;
- EPC Agreement - Turbine supplier and performance record;
- O and M Agreement - Turbine availability, performance and design life;
- Project Facility Agreement - Construction period, completion test;
- Debt Sizing - Off-take Agreement, counterparties;
- Amortisation Profile - Wind resource risk, design life;
- Project Development & Due Diligence - Independent experts.

This is a Featured Article from Navigator Project Finance. If you have any feedback or suggestions for future developments we would like to hear from you!

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Wind power generation is seasonal in nature which has got a direct effect on the projects Cashflow Available for Debt Service (CFADS). Rather than having a constant Annuity repayment profile we usually see Wind Power project debt facilities sculpted with a constant DSCR. The benefit of sculpting repayments is that the DSCR ratio and CFADS will drive Principal repayments and in this way take seasonal oscillations into account.

"If you would like to learn more about debt sculpting mechanics then you should attend the Debt Modelling Masterclass. If you are interested in learning how to set up a fully automated debt analysis tool the VBA for Financiers may be of interest to you"

Nick Crawley, Managing Director  
Navigator Project Finance

## Global Trends

We are currently seeing a substantial increase in project finance structuring of wind power projects, both for green fields, brown fields and acquisitions.

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Global warming and peak oil theories, as well as favourable legislation and general investor and consumer sentiment, are all forces that contribute to increased demand from renewable energy, and wind power in particular.

Wind power has been an energy source for hundreds of years, and as the technology used to extract and convert energy to electricity becomes proven and reliable, this usually also coincides with a lower marginal cost per unit of energy output, leading to better project economics.

Proven technology also decreases risk, and therefore increasing the chances of putting a limited or non-recourse project finance structure in place.

Companies such as Acciona Energia and Mariner Funds have been seen to recently adopt project finance as a source of funding for wind power projects. They are able to grow their project base and cashflow streams without putting the parent company "on the line" with every new project added to the portfolio of assets.

## About Navigator Project Finance

Founded in 2004, Navigator Project Finance Pty Ltd (Navigator) is the project finance modelling expert. Headquartered in Sydney, Australia, Navigator is raising the global benchmark in financial modelling services to the project finance sector. Navigator designs and constructs financial models for complex project financings, offers training courses throughout the Middle East, Asia and Europe, and conducts independent model reviews of project finance transaction models. Navigator delivers fast, flexible and rigorously-tested project finance services that provide unparalleled transparency and ease of use.

Customers include market leaders such as Deutsche Bank, ANZ Investment Bank, Bovis Lend Lease, Oxiana, Mirvac Property, Westpac and the Commonwealth Bank of Australia, together with leaders from the finance, mining, property, utilities, banking, chemical and infrastructure sectors.

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