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Finance and Administration

How Offshore Wind Projects are Financed

Offshore wind represents an important and still growing asset class among renewable energy projects. An increasing number of banks and institutional investors are engaging in this sector with different types of capital.

Large offshore wind energy projects are typically developed through a stand-alone project company (special purpose vehicle – SPV), which normally is owned by the project developer and in some cases together with institutional investors. The project company has the ability to raise debt on its own merits based on its revenues and balance sheet.

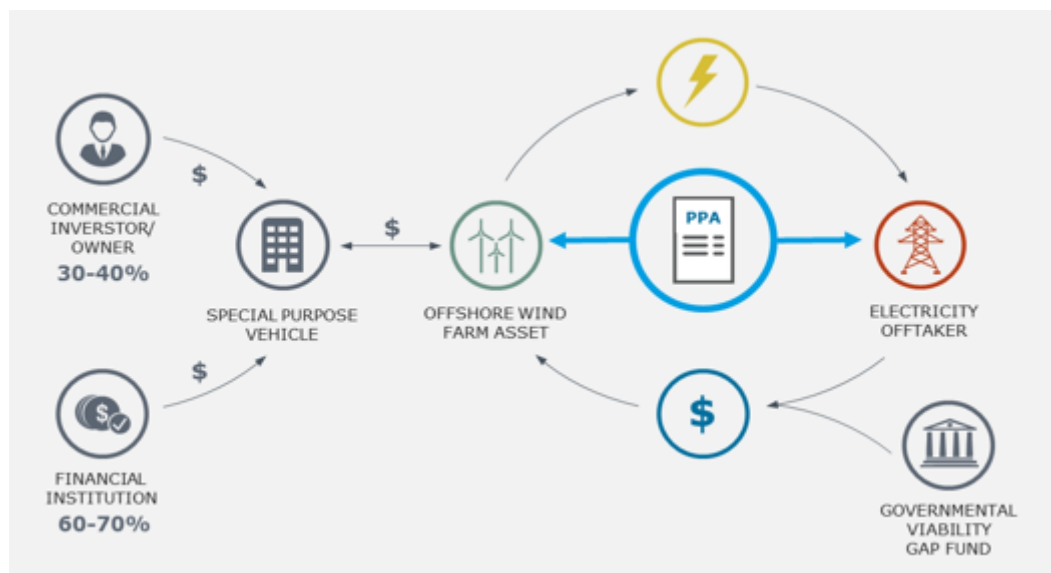


Figure 1 | Possible project finance set-up for an Indian offshore wind project

There are two sources of funding a project; one is by equity (or shareholder loans) from the owners, and the other is by banks in the form of project financing (mainly non-recourse financing). In case of project financing the split between debt and equity (debt/equity ratio) in today's market is often around 70/30.

Equity Financing with Institutional Investors

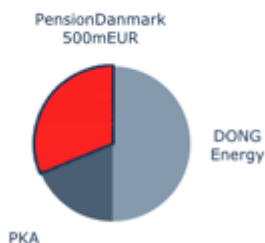
In the early days, institutional investors did not engage in offshore wind projects until after completion of construction. This meant that the financing of the development and construction had to be done by the project developer himself either by way of his own equity or in a combination with interim bank financing.

However, at a certain point around the year 2010, institutional investors began to perceive the offshore wind market in Europe as a more mature market, and consequently some institutional investors began engaging in providing financing up front at the ready to build stage. The Anholt 400MW Offshore Wind Farm in Denmark partly financed by Pension Danmark and PKA (two Danish pension funds) was one of the first OWFs financed this way.

Case 1: Anholt Wind Farm – March 2011

Joint venture with DONG Energy

- > 800mEUR deal (for 50% of the park)
- > PensionDanmark lead investor
 - > Created consortia
 - > Coordinated the process and the consortia co-operation
 - > Performed financial due diligence
 - > Coordinated the co-operation with external advisors and their due diligence
 - > Lead negotiations with DONG
 - > PensionDanmark acquired 30% of the park
- > External advisors to the consortia:
 - > Technical due diligence = COWI
 - > Legal due diligence = Bruun & Hjejle



PensionDanmark

Figure 2 | Investment structure for the Anholt Offshore Wind Farm

As offshore wind farms have become ever more "main stream" investments, an increasing number of different equity and debt providers have become interested in this market.

Japanese Trading Houses	Insurance Companies	European/North American private equity firms	Soverign Wealth Funds	Chinese Power Companies
<ul style="list-style-type: none"> • Among the leading independent power project sponsors around the world • Investments have been made in operational UK offshore wind power plants 	<ul style="list-style-type: none"> • Looking for utility scale energy and power projects to deploy substantial amounts of cash • Will either invest in operations phase only or require a construction risk guarantee 	<ul style="list-style-type: none"> • Looking for utility scale energy and power projects to deploy substantial amounts of funds 	<ul style="list-style-type: none"> • Will typically consider investments into projects which offer potential to re-deploy expertise gained in their respective home-markets • Generally prefer corporate to project level investments 	<ul style="list-style-type: none"> • Most companies have limited cash to invest abroad • Will typically only consider majority investments or JV with a significant say in strategic direction / operation of project

Project Financing (non-recourse)

With no recourse to the investors, lenders rely on project revenues, and they need to feel comfortable with the long-term operational performance of the project. This typically implies a very detailed and large contractual set-up, and extensive due diligence from the lenders side. Further, with no recourse to the investors, the lenders rely on the project's cash flow to service the debt. This situation will often result in lenders requiring limited indebtedness of the SPV and debt service reserves measured by a Debt Service Coverage Ratio (DSCR) or other financial ratios.

It is also important to note that structuring a project finance is time consuming. As it is a non-recourse financing, the lenders have to scrutinize the full project set-up including detailed contracts, wind studies, consents and permits, and of course especially the project risk matrix.

Despite the above, project financing is an important tool to raise funds for financing of offshore wind farms, and as demonstrated by the figure below, it is an increasing market.

Project finance transactions 2010-2016

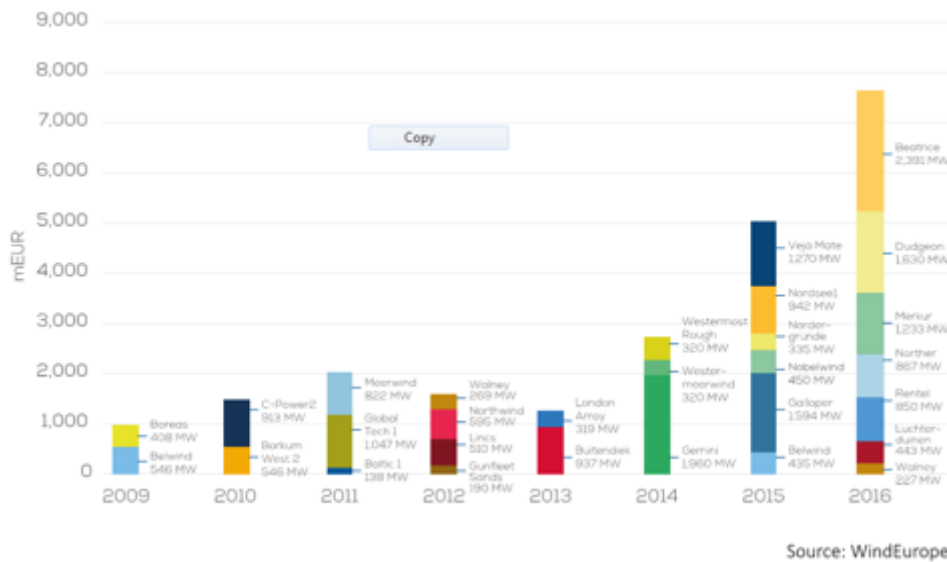


Figure 3 | Development in project finance transaction 2010-2016

Debt Financing Sources

When it comes to debt financing a number of different structures and options exist. The below figure compiles some of these possibilities.

International Commercial Bank Loans	Debt Capital Markets	Mezzanine Funds	Multilaterals	Export Credit Agencies
<ul style="list-style-type: none"> • Several banks have absolute limits on the financing tenor and liquidity can frequently be optimised with mini-perm structures • Increasing number of banks willing to lend to offshore projects has led to a decline in lending margins 	<ul style="list-style-type: none"> • Alternative to the bank, especially in the case of long term assets • Key issues to be considered are minimum rating requirements necessary to attract investors 	<ul style="list-style-type: none"> • Can substitute the additional equity from the sponsors • May increase the complexity of financing due to intercreditor issues 	<ul style="list-style-type: none"> • Long tenors generally available for energy projects • Comprehensive and lengthy approval procedures 	<ul style="list-style-type: none"> • Can only be involved for projects not yet commissioned • Decision-making process generally shorter than for multilaterals

Mini-perm: A short-term financing used to pay off income-producing construction or commercial properties, usually payable in 3-5 years. Mini-perm financing is something a developer would use until a project has been completed and can therefore start producing income.

How Offshore Wind Projects are Administered

As with any commercial activity, a range of administrative tasks must be completed in support of offshore wind projects. A number of areas needs to be covered in the administration including but not necessarily limited to the following:

- Business planning
- Corporate governance
- Accounting and financial reporting
- Quality control
- Health, safety and environmental management
- Subcontracts management
- Public relations
- Human relations
- Permits

Business Planning

Business planning activities include any activity engaged for the primary purpose of making a profit for the company. This encompasses all the economic activities carried out by a company during the course of business. Business activities, including operating, investing and financing activities, are ongoing and focused on creating value for the owner(s). Operating activities are the daily activities of a company involved in producing and selling its product, generating revenues, as well as general administrative and maintenance activities. Key operating activities for a company include manufacturing, sales, advertising and marketing activities. It is vital for a company to review the progress of any business. Hence any business regularly needs to assess the core activities of the company, assess the business efficiency, review the financial position, conduct a competitor analysis, conduct a customer and market analysis, update or redefine business goals, etc. A company will need to revisit and update the business plan regularly.

Corporate Governance

The company has to set up mechanisms, processes and relations by which corporations are controlled and directed. Governance structures and principles identify the distribution of rights and responsibilities among different participants in the corporation (such as the board of directors, managers, shareholders, creditors, auditors, regulators, and other stakeholders) and includes the rules and procedures for making decisions in corporate affairs. Corporate governance includes the

processes through which corporations' objectives are set and pursued in the context of the social, regulatory and market environment. Governance mechanisms include monitoring the actions, policies, practices, and decisions of corporations, their agents, and affected stakeholders.

Accounting and Financial Reporting

A company clearly needs a finance department handling accounting and other related financial activities. Further, a company will regularly have to produce financial reports on the company's financial performance. Financial reporting includes the external financial statements (income statement, statement of comprehensive income, balance sheet, statement of cash flows, and statement of stockholders' equity), and the notes to the financial statements. The company will have to produce an annual report if it is a separately registered company. If it is part of another company, it will have to deliver the same financial input to the mother company.

Quality Control

A company working with construction and operating a power generating asset needs to have a proper quality control organization in place. The organization must adhere to local regulations, but preferably it should also hold an international certification such as ISO 9001.

Health, Safety and Environmental Management

A company have a legal duty to put in place suitable arrangements to manage for health and safety and environmental issues. It should be part of the everyday process of running an organization and an integral part of workplace behaviors and attitudes. The keys to effectively managing for health, safety and environment are:

- leadership and management (including appropriate business processes) and
- a trained/skilled workforce operating in an environment where people are trusted and involved

Subcontracts Management

A company will have to monitor and manage all subcontracts. Subcontract management promotes consistency in managing subcontracts across functions and mitigates the risk to the company. Management of subcontracts can be identified through a subcontract lifecycle. Understanding specific tasks in managing the subcontract, as well as requirements and assignment of responsibilities during each lifecycle phase, will aid compliance. Knowing the specific tasks and responsibility within the organization is critical to success. All the specific tasks in each of the lifecycle phases, pre-award phase, Award phase, Post award phase and Contract close phase must be

reviewed. Further, a very important task related to subcontracts management is interface management. It is very important for a company to have a clear overview of interfaces between subcontracts in order to minimize claims, delays etc.

Public Relations

A company needs to promote itself if it need publicity on its activities. Through good public relations (PR), PR professionals focus on building a brand for the company as well as keeping the company's image unsullied. The activities that a PR department may handle are media relationship-building, social networking, event planning, crisis prevention and recovery, press release writing, brand development, internal communication, such as company newsletters, etc. PR professionals' first and most important priority is to build and protect the image of a company. This is done by building beneficial and lasting relationships with other companies and professionals in their area, including news reporters, magazine editors and politicians.

Human Relations

Human relations need to be handled professionally in any company. All aspects in relation to staff hiring, laying off, wages, pensions, social benefits etc. should be handled by a dedicated department ensuring that staff is treated equally and in accordance with local rules and regulations.

Further, if you are in a business where optimization of processes and production is essential, it is important that the skills of the employees are up-to date. Proper training presents often a prime opportunity to expand the knowledge base of all employees. However, despite potential drawbacks (training is costly and take away time from production), training and development provides both the individual and the company with benefits that make the cost and time a worthwhile investment. The benefits are improved employee performance and responsibility, increased productivity and adherence to quality standards, improved employee satisfaction and morale, less employee turnover, increases innovation as ideas can be formed as a result of training, etc.

Permits

Operating within the offshore business requires a substantial number of permits before operation can begin and these take time to receive and are costly to get. However, they are necessary for the business. Permits cover for instance concession, construction, operation and environment. The list for a specific project is long and varies quite a lot from country to country. It is therefore extremely important to map the required permits very early in the project development, and to keep reviewing and updating the needed permits and licenses.

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