

Securing financing for cold climate projects

Justin Jeffs

Head of Investment & Economics

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About the company

CEO:	Peter Tjernström
Business launched:	2003
Number of employees:	40
Turnover 2012:	MSEK 50
Headquarters:	Falkenberg
Regional offices:	Östersund/Storuman Falun Stockholm Gothenburg Helsinki



Our watchwords are cutting edge, commitment, quality and sustainability.

European wind– an investor perspective

- Financing constrained relative to demand
- Many European markets are off limits
- New institutional infrastructure fund raising and ‘dry powder’ reducing, but allocation to ‘renewables’ up
- Cost of institutional capital high
- Commercial banks less active
- FIT favoured over merchant markets, but need to be backed by strong government
- Professionalism of wind industry needs to be improved and track record of returns needed

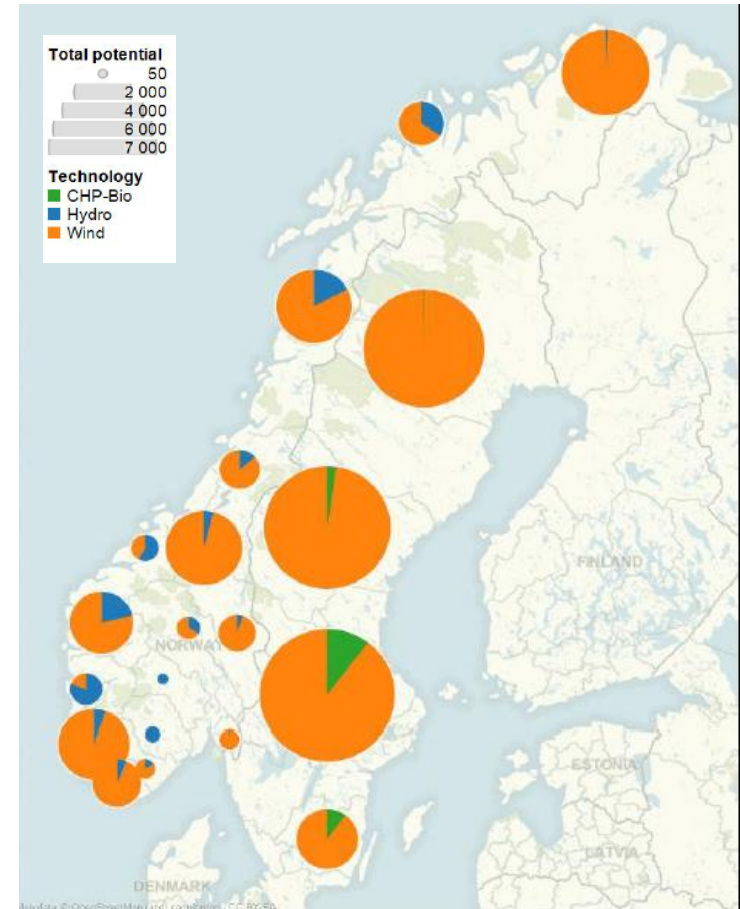
Sweden/Norway - a joint market for development

- Increasing maturity
- New entrants attracted by low risk markets and saturation in home markets
- Lower investment costs for projects
- Improved planning and permitting process
- Development spreading North supported by anti-/de-icing technology

But:

- Business cases hard to justify
- Questions over the effects of a common Swedish-Norwegian certificate system and Swedish area pricing
- Lower prices for project exits
- Grid connectivity still a problem

Renewable Energy Potential - Norway & Sweden 2020 (MW)



Source: PÖYRY.

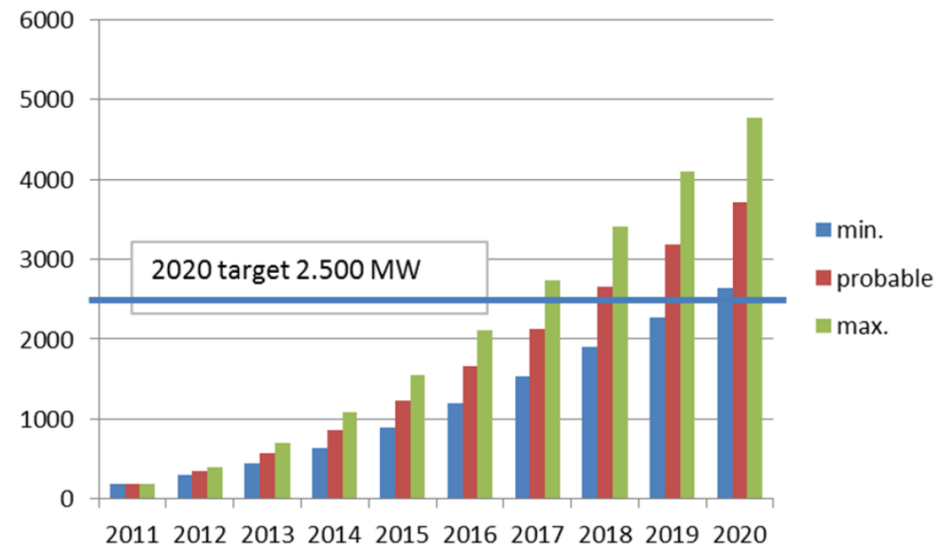
Finland – Europe's growth market?

- A new feed-in-tariff was implemented in April 2011. 2 500 MW is included in the system.
- Guaranteed price, 83,5 €/ MWh for 12 years (plus bonus of 20 €/ MWh prior to 2015). Not index linked.
- If electricity price is less than 30 €/MWh, fixed premium (53,5€ / MWh) is paid.
- Current pipeline > 6000MW

But

- Well publicised problems with planning
- Wind conditions?
- Long term outlook post 2500MW
- Early stage market with few opportunities for investors

Annual Wind Power Production in Finland Forecast



Finnish Wind Power Association 26th April 2012

Sources of equity

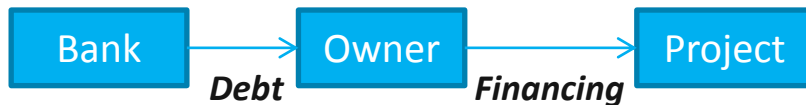
Ready to build

Type of financing	Development	Construction	Operation
Equity	<ul style="list-style-type: none"> • Own funds • JV Partners • Venture Capital 	<ul style="list-style-type: none"> • Private equity • Supply chain • Public sector financing • Strategics 	<ul style="list-style-type: none"> • Public equity markets • Corporates • Infrastructure funds • Pension funds
Equity Returns Sought:	25%+	<i>12% from operation plus cost of financing during build</i>	12%

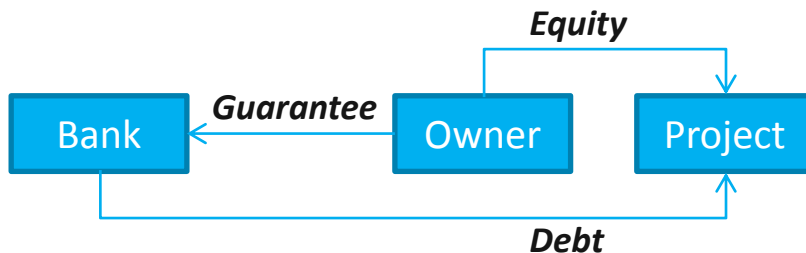
Debt options

External collateral/ pledges available

- **Lending through owner's balance sheet**
 - Easy to arrange; price depends on owner
 - Repayment not necessarily linked to project cash flows
 - Flexible financial structure in ProjectCo



- **Guarantee by owner's balance sheet**
 - Project cash flows more important for repayment
 - High leverage on ProjectCo level



No external collateral/ pledges available

- **Project bonds**
 - ProjectCo taps into financial market directly
 - Credit rating, high transaction costs, large projects only
 - Increasingly relevant in the current financial market?



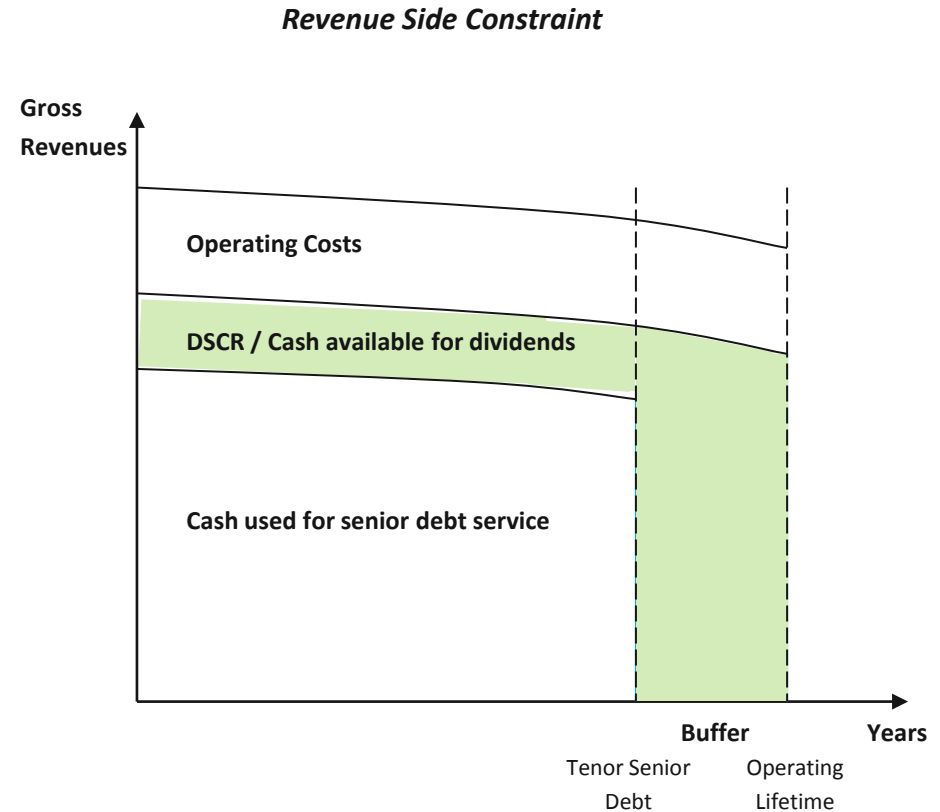
- **Project finance**
 - No external guarantees; recourse only to project assets
 - All project assets pledged
 - Strong emphasis on project cash flow and debt service
 - Cost of financing depends on project risks



Source: Aalto Capital

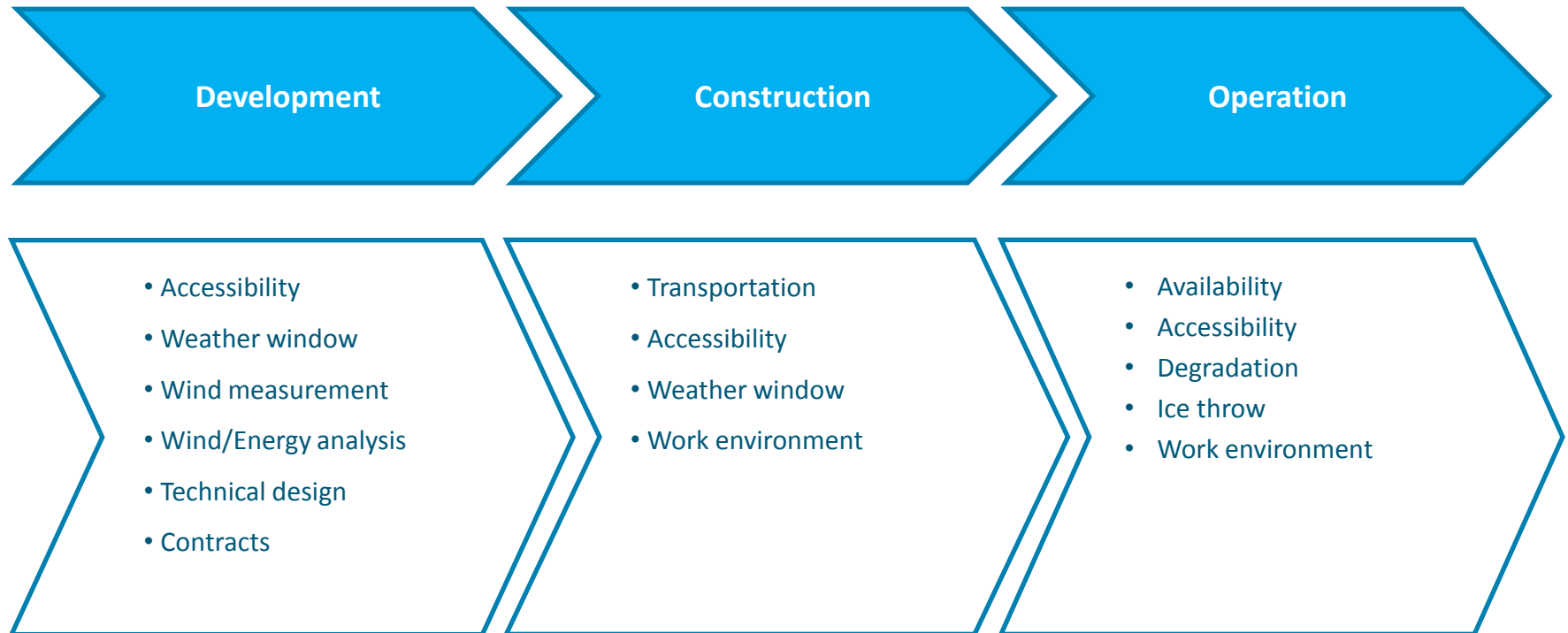
Project finance is about minimising risk/volatility

- Risk assessment key, namely credit, wind, technology, price, financial and legal/political
- Project development costs may be higher in project financed projects to create bankability
 - Wind measurement, agreements, etc more carefully done
 - Bankable feasibility study
- Costs and revenues as strongly fixed as possible
 - Risk transferred to counterparties in the agreements (EPC, PPA, O&M...)
 - As a trade-off, higher costs and lower revenues; thus lower profitability
- Other requirements by the bank to enhance the bankability
 - Escrow / reserve accounts
 - Restrictions on dividends
 - Covenants



Source: Green Giraffe Energy Bankers, Aalto Capital

The impact of cold climates



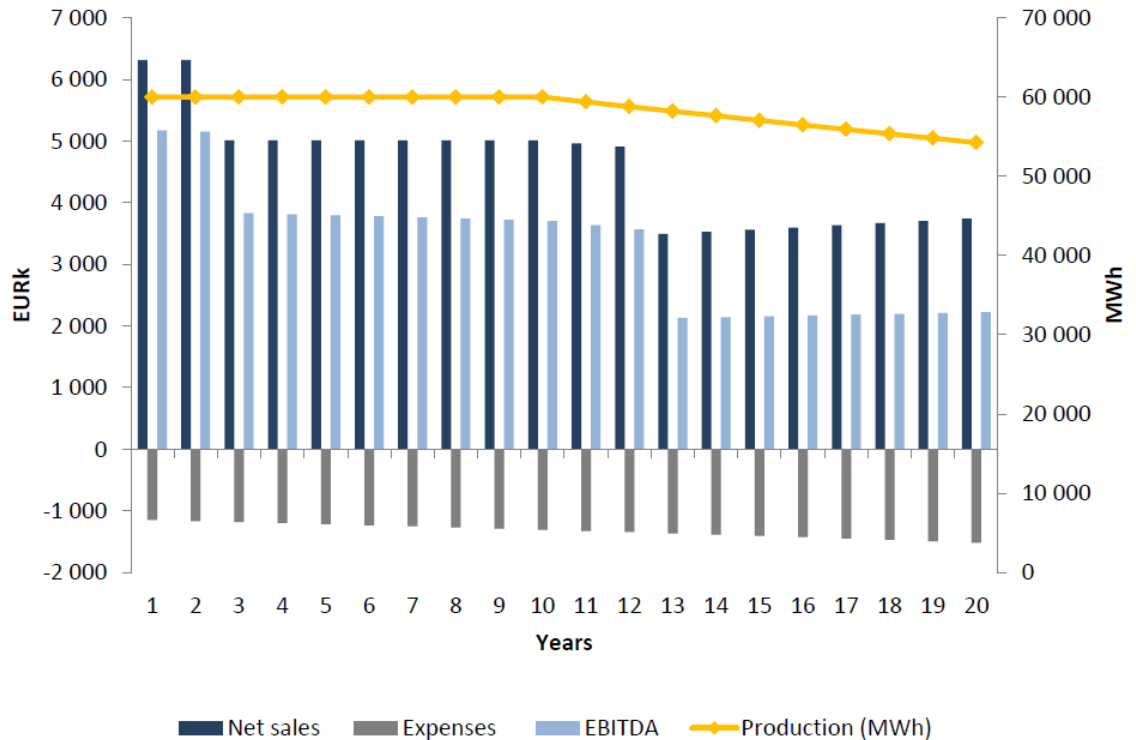
A variety of risks including higher investment costs, more expensive O&M, lower production and shorter lifespan for plant...

Example: Project financing a Finnish project

Key parameters

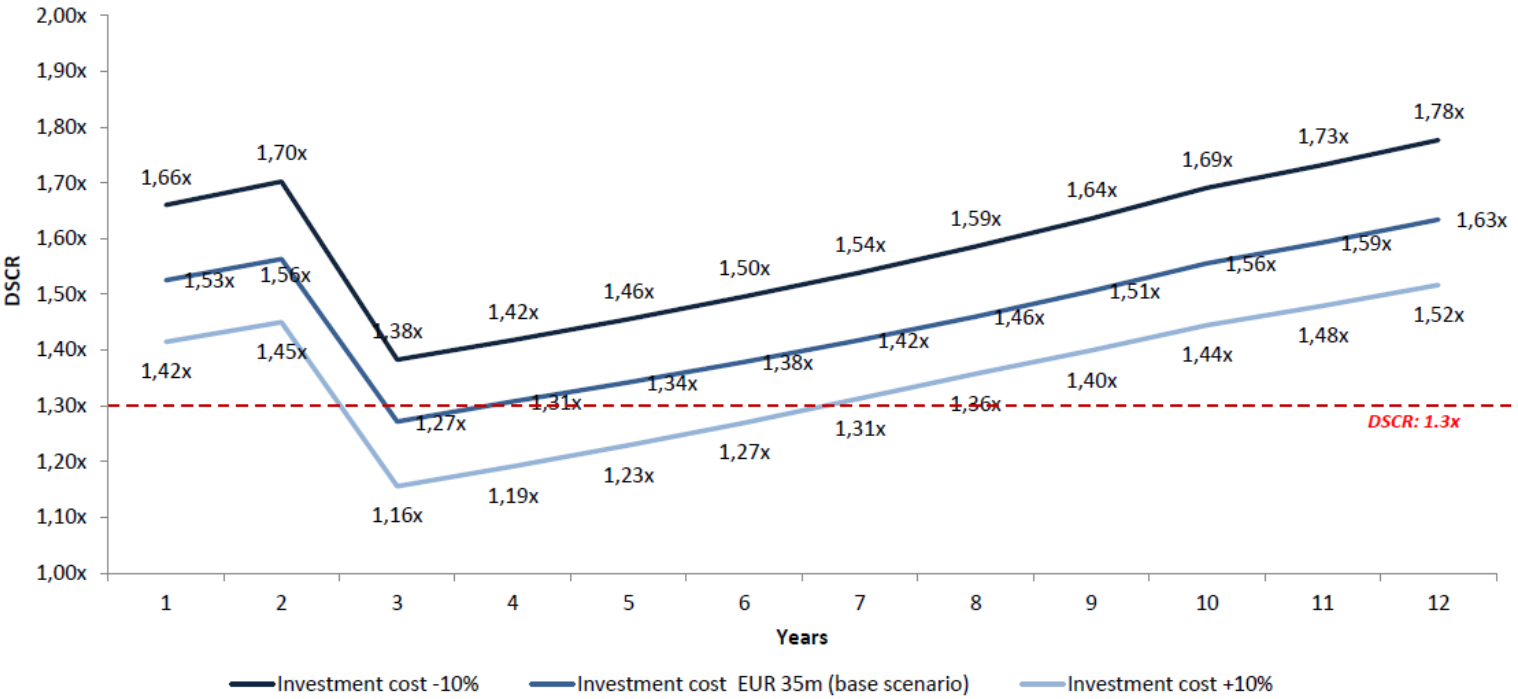
- 10 WTGs * 2.3MW
- Annual production 60,000 MWh
- Investment cost EUR 35m
- Annual operational costs EUR 1.2m
- Capital structure
 - Debt 70% (interest rate 5%)
 - Equity 30%
- Start of operations on Jan 1st , 2014

Key financials



Debt Service Capacity is Highly Dependent on Investment Cost...

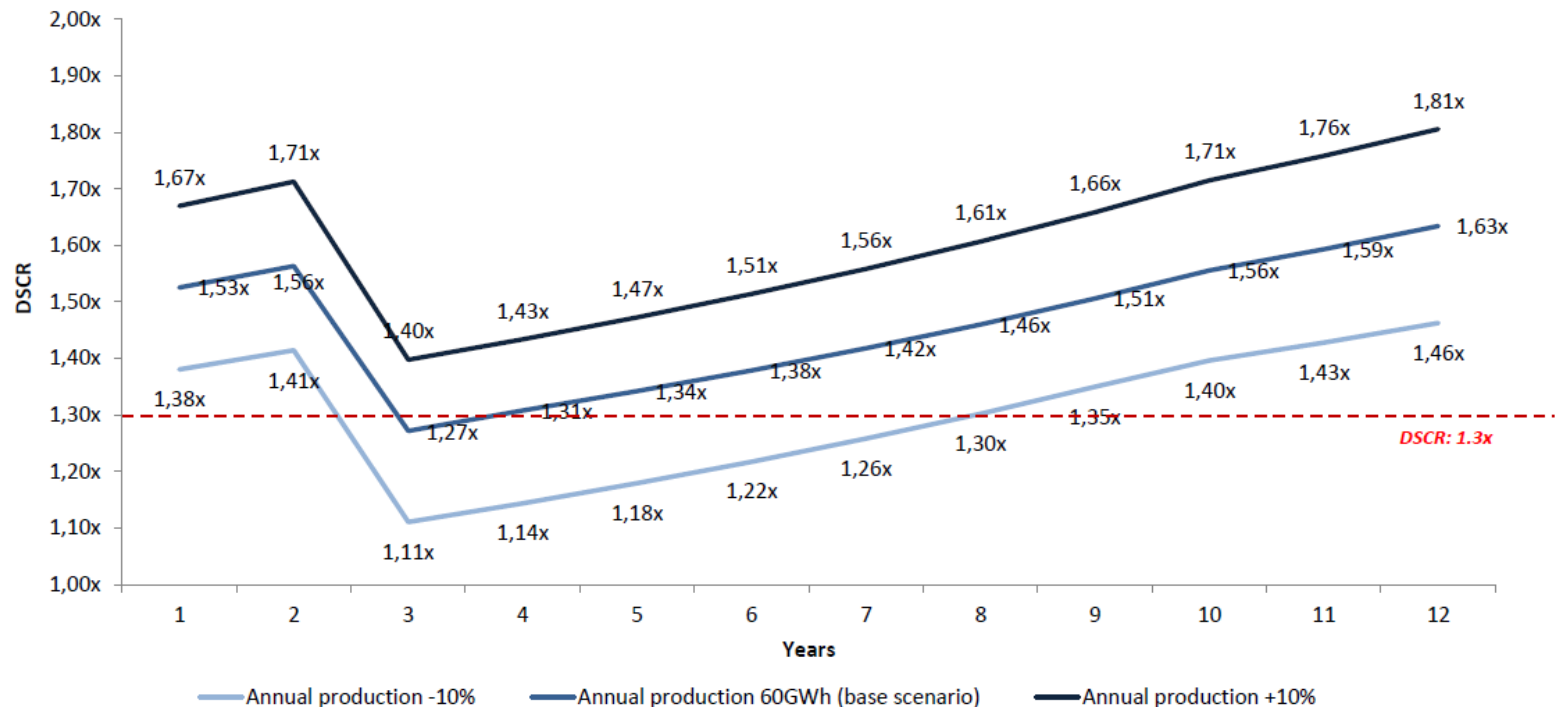
Debt service coverage ratio (DSCR) sensitivity to investment cost



Source: Aalto Capital

...and Annual Production

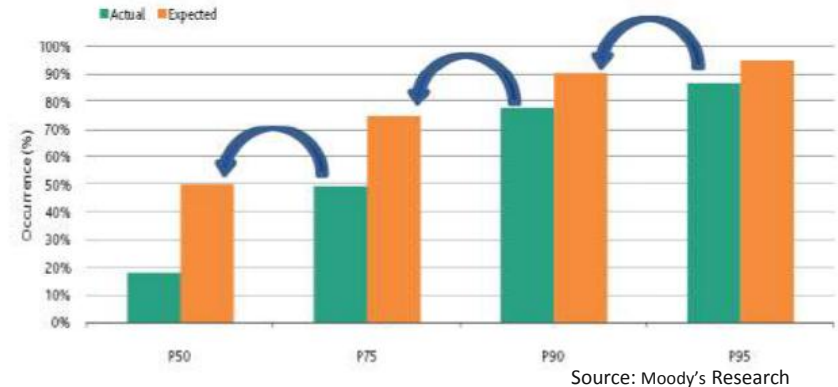
Debt service coverage ratio (DSCR) sensitivity to annual production



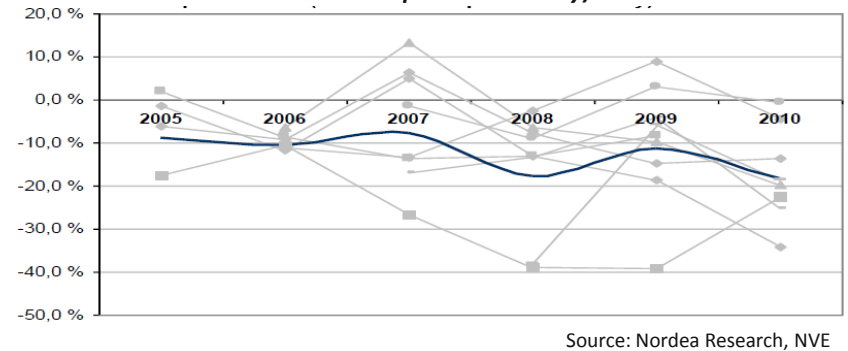
How to secure (and repay) financing

- Financing wind projects is tough, cold climate conditions make it harder
- Must be able to demonstrate that cashflows are sufficient to repay debt
 - The wind energy resource drives returns
 - Long term availability and performance of technology are essential
 - Operational management – el/certs trading, O&M
- Credible, credit worthy management
- Engage banks and investors early

Occurrence of probability scenarios (Actual v Expected)



Estimated normal production versus actual production (various wind parks in Norway)



Conclusions

- Financing conditions in Europe are tough
- Financing follows quality cashflows - higher returns do not compensate for higher risk
- Significant wind capacity exists in the Nordic region but conditions can be more difficult
- Only the best wind sites and professionally developed/managed projects will obtain financing
- Expertise, good planning and a long term commitment are required to succeed (now more than ever)

Questions, thoughts, want to know more?

Contact:

Justin Jeffs

justin.jeffs@triventus.com

+46 (0)70-251 2396