



All Energy Conference

Session: Specially for Farmers

How to buy a wind turbine and steps involved in getting a wind project up and running

Wednesday 19 May 2010

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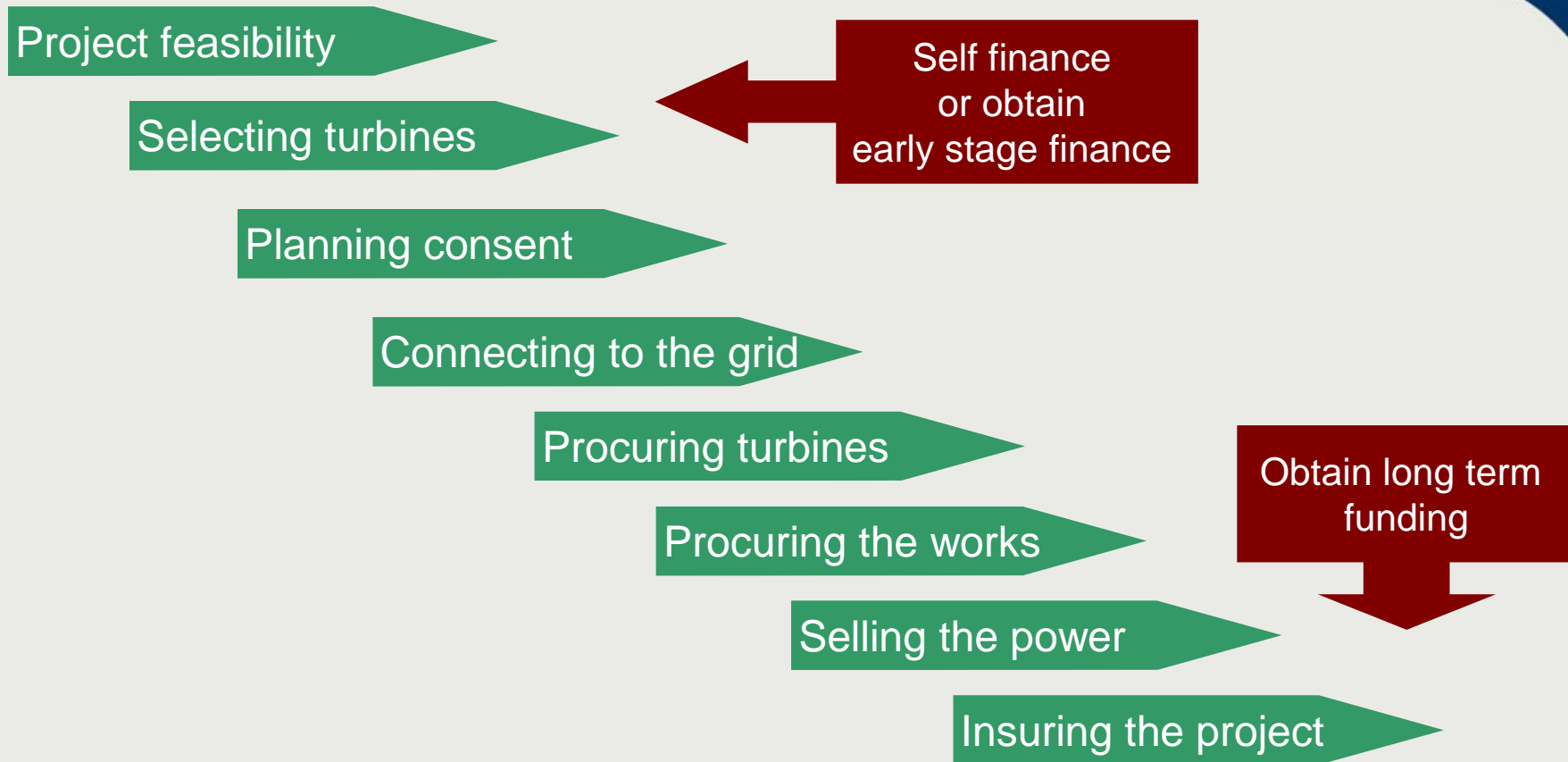


Today's talk

- > Run through the steps involved in setting up a small windfarm
- > Focus on 1-3MW windfarms
- > Discuss 300-500kW wind turbine procurement
- > Consider sources of funds
- > Will the Coalition Government change things?



The steps to set up a windfarm





Project feasibility

- > Estimate your project revenues
- > Obtain a wind assessment
- > Remember power output = wind speed³
- > Remember market price is volatile
- > Estimate your project costs
- > Distance to grid connection point
- > Consider the location of the turbines
- > Consider transport links
- > Review the land rights required for the project



Selecting turbines

- > Wind speed and turbine class
- > Wind speed and turbine rating
- > Consider your site and number and size of turbines
- > Consider the available grid connection capacity
- > Consider local planning policy
- > Decide on the most suitable turbine type
- > Decide on financing – if external, select turbines with proven track record
- > Hold exploratory talks with 3 suppliers
- > Agree commercial terms and ensure contract terms satisfy external funders



Planning consent

- > The great variable
- > But it is important to ensure the consent will meet your requirements
 - must know at least the size parameters of your turbine
 - must know location of your turbines
 - must know your access requirements
- > The consent will only be valid to extent of permission
- > The consent will contain conditions which you must satisfy
- > Must conduct EIA: environmental impact assessment



Connecting to the grid

- > You need a contract
- > DNO – SP or SSE – must offer you a connection
- > Usually expensive and in the distant future
- > A queue system operates, so obtain position early
- > Distance to the grid connection point will bear on cost
- > Contestable and non-contestable works
- > Contracts in the name of the correct party



Procuring turbines

- > Confirm financing strategy
- > Hold exploratory talks with 3 suppliers
- > Remember you will need to make payments in advance
- > Be sure about their covenant
- > Agree commercial terms
- > Consider who will design platform infrastructure
- > Ensure contract terms match your other contracts
- > Ensure contract terms will satisfy external funders
- > Remember maintenance contracts



Procuring the works

- > Design is important
- > Must appoint designer and check PI cover
- > Least risky/most costly to appoint a single balance of plant contractor
- > Use proper form of contract
- > Hold mini tender for the contract
- > Ensure turbine supply contract and works contract match
- > Consider appointing project manager to run process
- > Collateral warranties



Selling the power

- > More power purchasers today including green companies and supermarkets
- > Sell long term or short term
- > Consider the views of your funders
- > ROCs or feed in tariff
- > The impact of banding on sizing your project
- > PPA contract
- > Local supply contracts



Insuring the project

- > There are many project risks
- > The turbines and construction works are obvious
- > But consider also
 - transit insurance
 - faulty design
 - loss of revenue
- > Who needs to be insured?
- > The impact of the source of finance

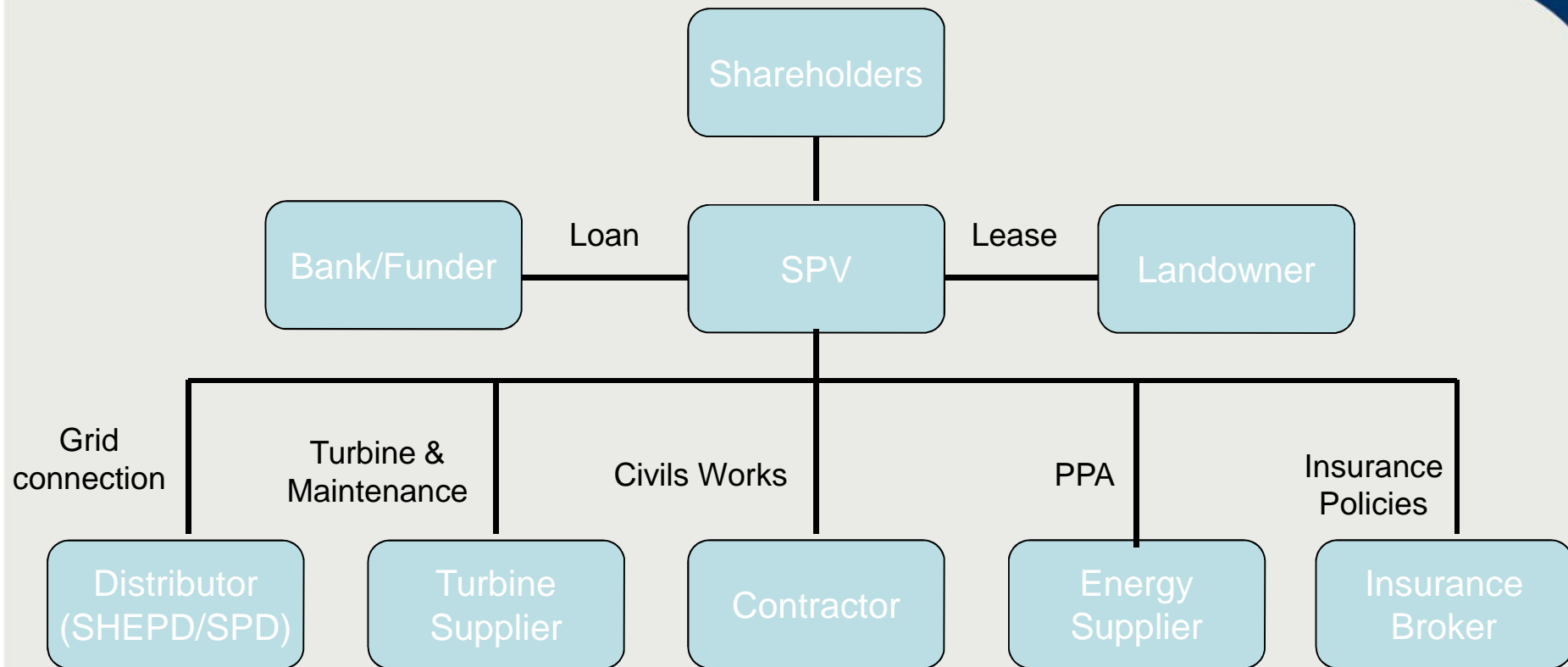


Sources of finance

- > Your own capital – some essential
- > External equity – JV or passive investors
- > Secured debt with recourse to farm assets
- > Non recourse project finance
- > It will have impact upon your project
 - set up company to run project
 - more funder due diligence
 - takes longer, but only weeks not months
 - greater assurance
- > Lease finance products



SPV Project Structure for Non Recourse Finance





Securing the finance

- > If you can afford the entire project cost yourself, you can do what you like!
- > If you need or want external finance, you need to think about their requirements
- > If you plan to raise equity or debt, ensure contracts in satisfactory form
- > Hold talks with funders to obtain best terms but choose early
- > Consider impact of financing on your project at the outset



Impact of Coalition Government

- > Support the “full establishment” of feed in tariffs
- > Continue to support the ROC mechanism
- > Support the creation of a green bank
- > Support new nuclear but without public subsidy and Lib Dem in charge...
- > Support “huge increase in energy from waste through anaerobic digestion”
- > Support “measures to encourage marine energy”



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