

Planning for Financial Viability

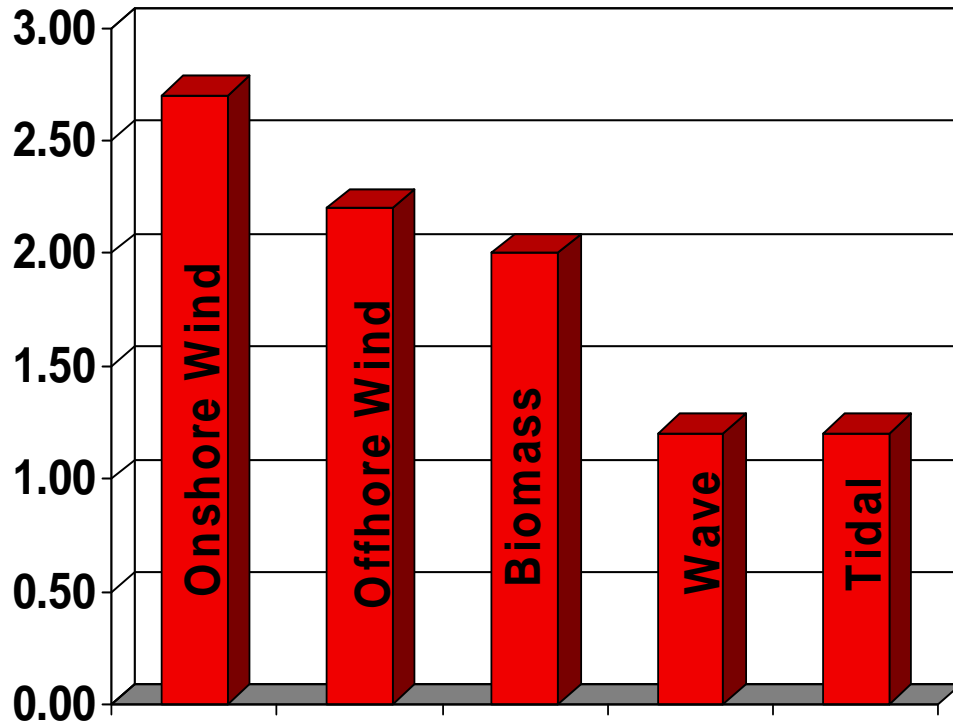
Ernst & Young Renewable Energy Group

Adrian Scholtz, Senior Executive

Broadwalk House
Southernhay West
Exeter
EX1 1LFE
Tel: +44 (0) 1392 284387
Fax: +44 (0) 1392 284302
E-mail: ascholtz@uk.ey.com

Only a ruthless attitude to achieving bankability and a continuous appraisal of banking requirements throughout the project development process will achieve the ultimate goal of securing
Project Finance

How Banks View Technologies



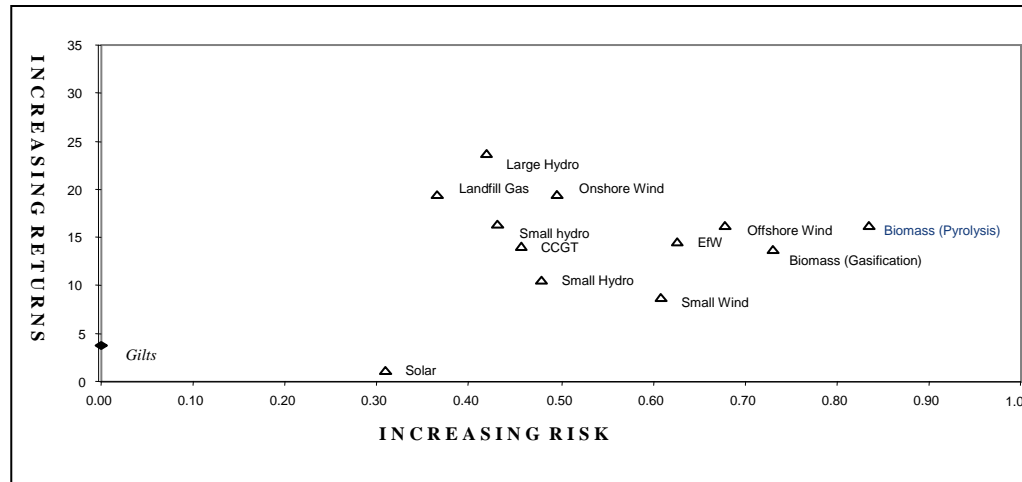
Source: Ernst & Young - Bank Survey, 2002

Interviews were conducted with major international banks with the objective of establishing the banking sectors' attitude to various types of renewable energy technologies relative to offshore wind, jurisdictional preferences for offshore wind projects, manufacturer preferences, attitude to various risks (permitting, construction, technology, merchant). Responses were standardised on the scale of 1 (least) to 3 (most).

- Independent resource assessments are key
- Onshore wind is viewed as an established commercial energy source
- Offshore wind is still ranked ahead of conventional Biomass
- Banks consider the strength of suppliers' warranties and the actual performance of technologies over a period of time, together with scale up and system integration risks
- All cashflows are sensitised to ensure that key cover ratios are maintained

Technology Risk & Rewards

The greater the risk, the greater the requirement for capital grants, other support mechanisms and the presence of a strong equity partner with either explicit or implicit support



Examples of potential Capital Grants

Regional Selective Assistance (RSA)

- Capex > £500k (up to 35%)
- Private sector only

Enterprise Grant Schemes

- SMEs only
- Capex <£500k (up to 15%)

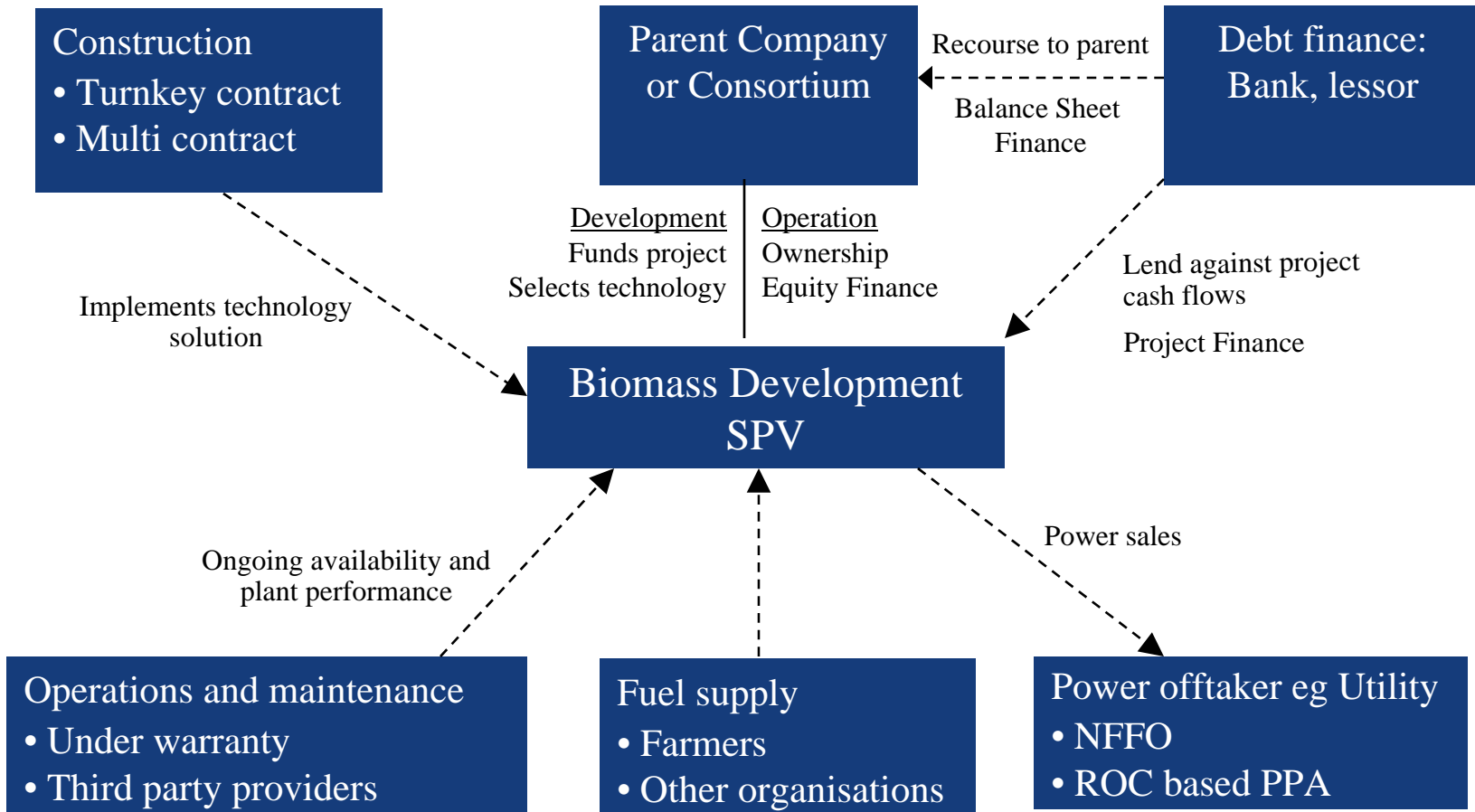
DTI Capital Grants

- Bio-energy Capital Grants scheme (£66m made available to date)
- No new applications currently being accepted

Objective 1

- Cornwall qualifies for European Regional Development Funding grants
- The environment is 1 of 3 cross cutting themes
- Access either direct via the Single Programming Document or a variety of Umbrella funds

Key Contractual Arrangements for a Biomass Project



Construction

Given past technology issues, a turnkey contract is an important criteria to potential lenders

Key Risks

- Reliability of the technology
- Construction on time and on budget
- Impact of delays on commissioning

- Ability of contractor(s) to

Guarantees need to be sufficiently concrete and financially punitive to ensure that if difficulties are experienced, the project will be no worse off financially

liabilities that they may incur

Lenders look for:

- Strong track records of turnkey contractors and equipment suppliers
- Large balance sheet sizes of turnkey contractors/sub-contractors and transparency of warranties provided

- The implementation of an appropriate performance bond

Operation and Maintenance

Many of the key risks are a continuation of the key construction risks.

Key Risks

- Reliability of technology
- Contractor skills and commitment
- Financial strength of the contractor and sub-contractors

Lenders look for:

- Long term commitment from the construction contractor/technology provider

.....The longer the better
- Fixed price O&M contracts providing a specific availability %

- Suitable guarantees/bonds in place

Fuel Supply

Fuel supply is particularly relevant to biomass projects and can be difficult to manage.

Key Risks

- Often large numbers of suppliers are involved, with low quality covenants (rather than a single blue chip supplier with a CCGT plant)
- Practical difficulties, such as
 - Consistency of supply due to weather and ground conditions
 - Transport

Lenders look for:

- Security over quantity and quality
- A minimal number of long term contracts throughout the debt term
- Fixed or floor contract prices
- Sufficient covenants to provide financial recourse if contracts are not honoured

Overcoming Fuel Supply Risk

Use a middleman

- Reduces number of supply contracts
- Improved covenant strength
- In effect, accepts fuel supply risk
- Reduces transport risk
- Consider arrangements with companies with haulage interests, waste management companies, companies with agricultural interests
- Partner appraisal and selection is a key area for realising commercial opportunity and increasing value

Incentivise suppliers

- To provide consistent quantity and quality of fuel supply
- Ratcheted consideration or project equity if targets are met
- Better still: encouraging the main suppliers to collectively take a long term project equity position

Innovative payment mechanisms

- Additional payments may be made if certain fuel quality targets are achieved

Overcoming Fuel Supply Risk

Long term security

- Use of forward sales agreements for a series of energy crop harvests provides a long term incentive for suppliers to meet obligations
- May also be applied to forward gate fees

Supplier bankruptcy

- Supply contracts should contain clauses providing access to fuel sources
- Generator may take a charge over fuel supplies
- Generator gains access to land where fuel is grown or stored

Insurance / Contingency

- Against land and weather risk: Fire, drought, disease
- Plan for access to alternative fuel types
- Prepare crop management plans

Power Offtake

The PPA must provide a secure income stream throughout a project's debt term.

Key Risks

- NFFOs are low risk: Long term and fixed in price, with government guarantees to ensure payments are honoured
- ROC contracts:
 - Availability of long term PPAs and the level of discount offtakers expect
 - TXU: Is the offtaker credit-worthy?
 - Market based support structure. Therefore short term prices may fluctuate
 - Political risk: Targets must be sufficiently long term/potential impact of an international trading system

Lenders look for:

- Long term contract must have a fixed or floor price throughout
- Leverage may be restricted by the level of the discount for a long term contract
- Credit-worthiness of off-taker, eg Parent company guarantees

- Guarantees that all power will be taken by the offtaker

Enhancing Power Offtake

Opportunities for negotiating favourable ROC based PPAs

PPA tender

- High quality formal tender will obtain the best value from suppliers
- Request a variety of PPA structures from suppliers
- Off-takers should be pressed for as much detail as possible i.e components of their offers: Power/ROC/LEC/embedded
- Play them off against each other
- Consider a break option to take advantage of improved circumstances in the future
- Price escalation (eg RPI)

ROC targets

- Recently extended to 15% by 2015
- This increased security should decrease the discount on long term PPAs

Conclusion: Dealing with lenders

Project size

- Small projects will have more difficulty in raising finance
- High fixed cost of raising finance
- Difficulties in obtaining committed lender resource
- Suggest bundling small/similar projects as a portfolio
- Can be incorporated into a rolling finance facility

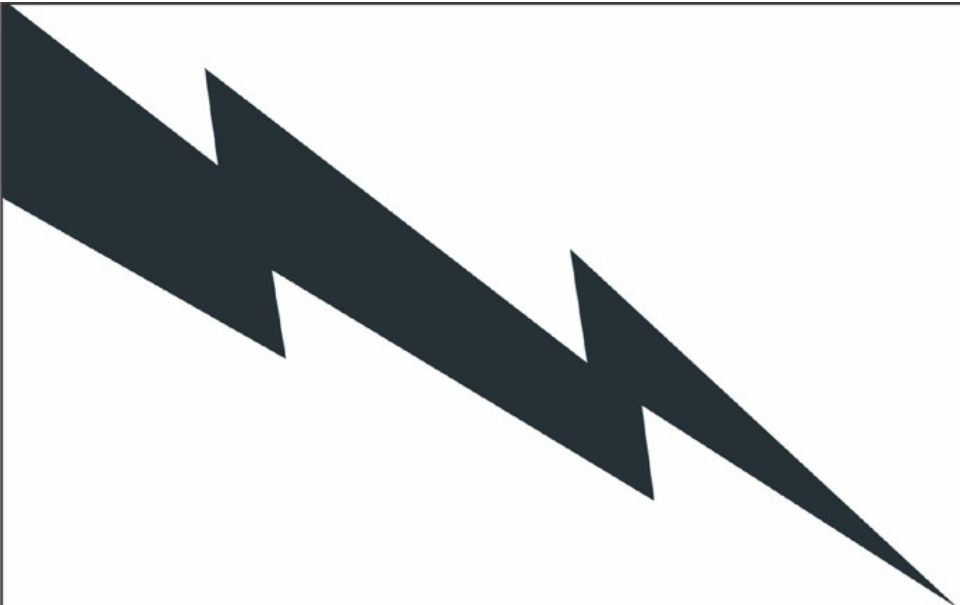
Project Economics

- Critical to finance raising in the absence of the security of a strong balance sheet
- The projected standalone cash flows, balance sheet and profit and loss will be the only factors that lenders base their finance upon
- In deriving these, lenders will always assume a base case

Which banks

- Approach lenders who understand the technology
- Decreases education required
- More prompt lending decision
- Saves time and money

Ernst & Young came N°1 for Project Finance in EMEA in 2002



When financing renewable energy, we provide the **spark**.

The energy to drive tomorrow's sustainable world won't just appear out of thin air. Creating the infrastructure to harness renewable energy sources like wind, wave, biomass and solar power requires creative financing. Not to mention sound business advice.

Our Renewable Energy team offers both the financial expertise and passionate commitment to power the most complex renewable energy project.

For inspiration in a flash, contact Jonathan Johns on 01392 284300.

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