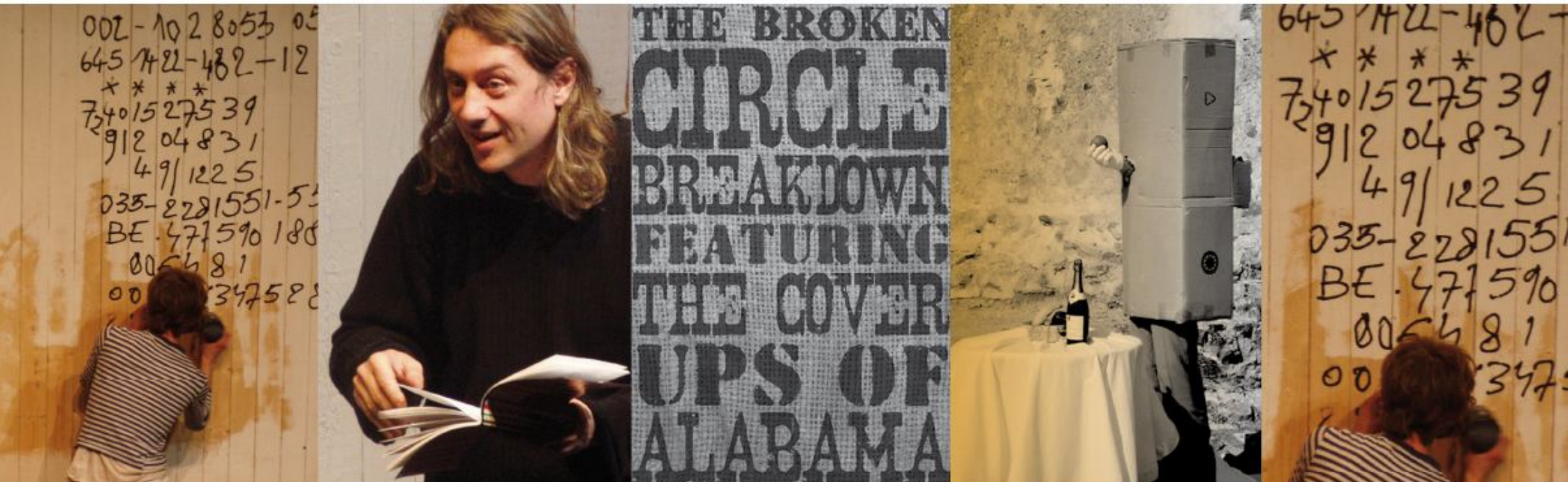


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Bank Financing Solar PV

Ireland's Solar Energy Future – Cork 29th January 2016

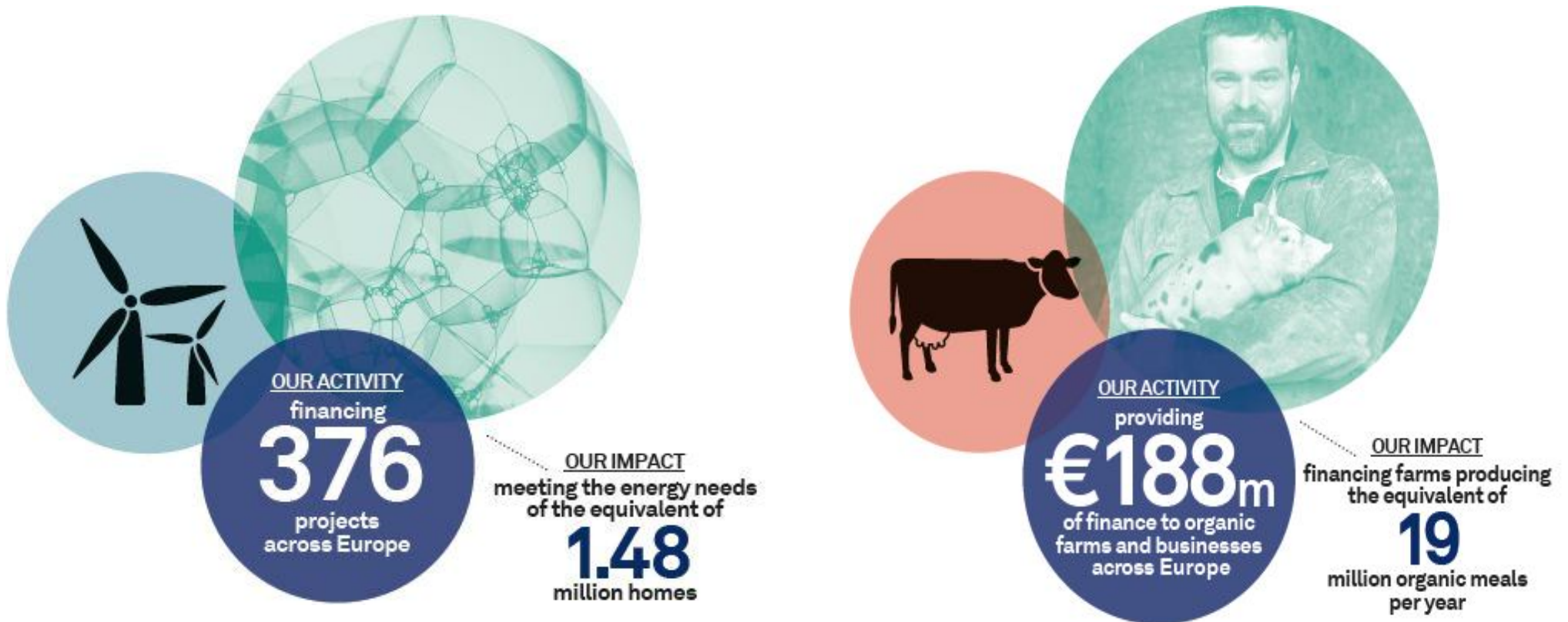


Content

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What makes us different?



Source: Triodos Bank Annual Report 2013

- Ethos is to connect savers with borrowers in a transparent way
- 100% of Triodos Bank loans and investments benefit sustainable projects

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Ireland offering

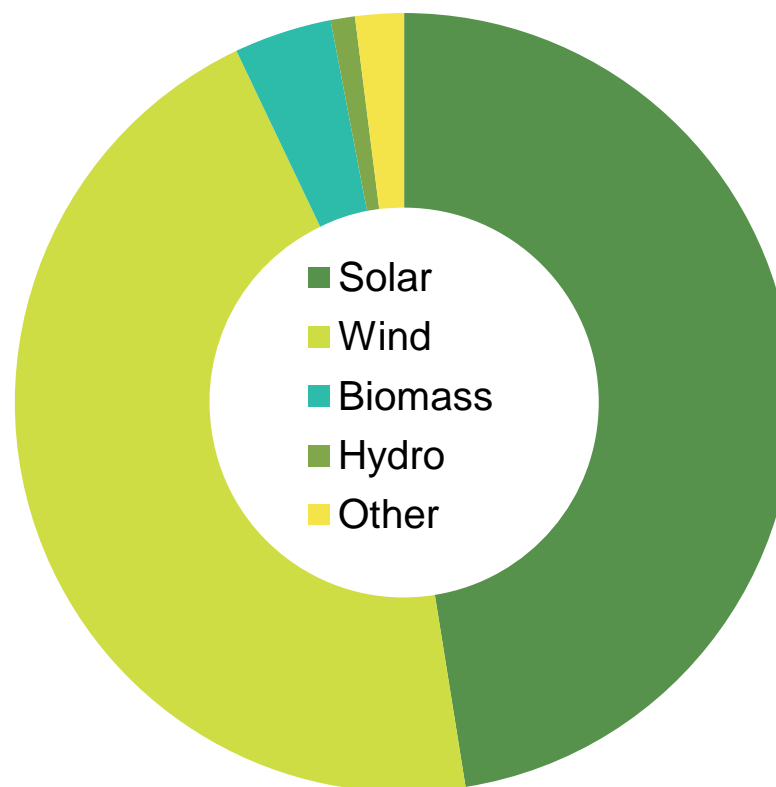
- Active in IR since 2003 – currently have 9 projects
- Sectors
 - Wind
 - Hydro
 - Solar
 - Biomass
 - Energy efficiency
- Offering
 - Project finance loans from €2 to €20 million
 - Construction + long term amortising loan
 - Fixed pricing: Construction finance plus term of loan
 - No cash sweeps

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Environment sector portfolio

	€million
Wind	534.1
Solar	556.2
Hydro	8.5
Biomass	49.8
Other	14.2
Total	1,163

Group portfolio
shows strong
experience of Group
across of number of
different sectors



EXAMPLES OF PROJECTS TRIODOS HAS FINANCED

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Roof mounted solar project

Worthy Farm, Glastonbury



In 2010 Triodos provided funding for Michael Eavis, the farmer behind the Glastonbury Festival, to put a 200 kWp solar array on the roof of his cow shed, the dubbed the “Mootel”

- Approx. 80% of energy generated is used by the dairy farm, remainder exported to the grid
- At the time the second largest solar array in the country
- Triodos worked closely with Michael to agree a loan structure that suited the solar project without interfering with his farming business



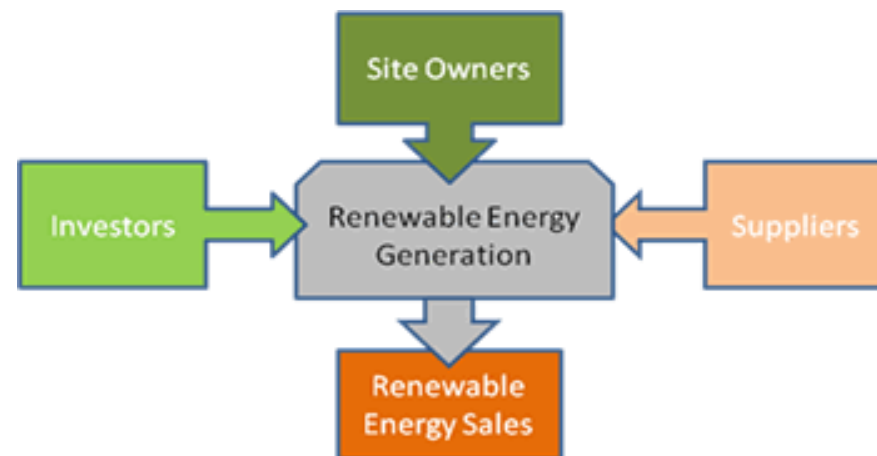
The Triodos Team at Worthy Farm, October 2010

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On farm solar project

Farm Power Apollo, Bourne Park

- Triodos re-financed a project at Bourne Park to supply energy to an anaerobic digestion plant on a neighbouring farm
- Energy supplied for a higher price than that achieved that by selling wholesale to the grid via a PPA
- Farm Power Apollo, ANESCO and Opus Energy have partnered to install and commission one of the UK's first commercial-scale solar battery units.



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Community solar project

Chelwood Solar Farm, Chelwood, North Somerset

- Community owned 5MW project
- £2.5million raised through a community share offer
- remainder funded by Triodos debt
- Surplus income is invested in the Chelwood Community Benefit Fund – forecasted at an averaged of £48,000 per year over the life of the project

Mongoose Energy
*Project Managers/
Development Partner*



Chelwood Community
Energy Ltd
Community Benefit Society
Project Company run by
community leaders; shares
owned by local individuals



Chelwood Solar Limited



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Supply large businesses – e.g. Bristol Water

Solaris Real

- A 3MW ground mounted project at Purton Water Treatment Works
- one of two key strategic sites owned and managed by Bristol Water Plc to supply the city of Bristol and its surrounding area with clean water
- 100% of energy output supplied to Bristol Water Plc



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Ground mounted power plant

Folly Farm

- commitment of over £9million by the bank
- financing the acquisition of a 13.1 MW ground mounted solar farm near Long Marston, Buckinghamshire
- site commissioned in 2015
- worked with companies from Denmark and Germany to see the project come to fruition



FUNDING MECHANISMS

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Crowd funding and Community Share Offer

Community Share
Offer Issued



Shares sold and equity
raised through Ethex, a not-
for-profit web-based
investment platform



Debt funding added



**Acquisition,
Development,
and Operation of
the site**



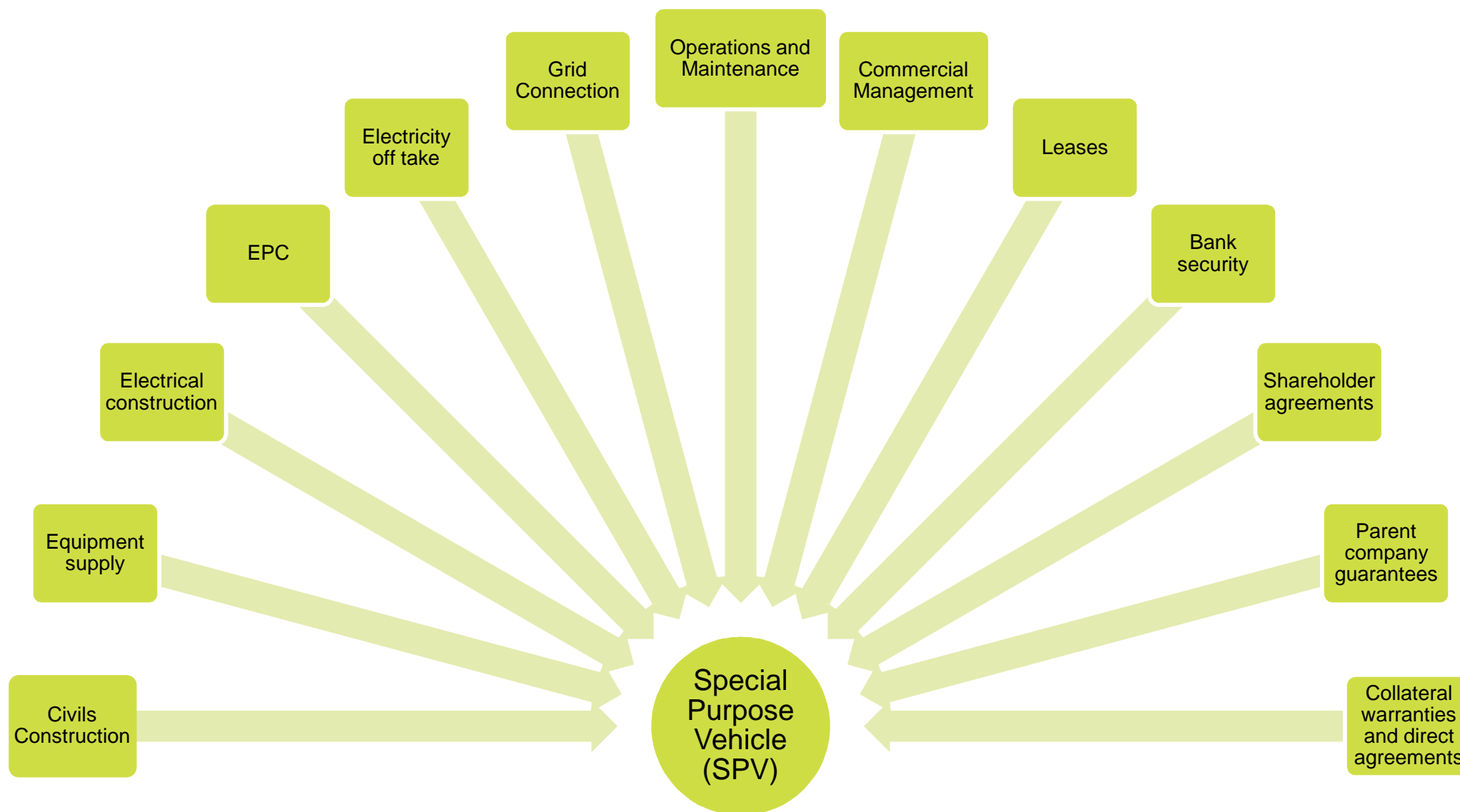
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Bank funding - Good practice

- Investment readiness
 - Strong governance
 - Bankability
 - Sponsor and/or community support
- Bank funding = “begin with the end in mind”
 - Engage with your bank early and develop a relationship
 - Work with experienced advisors who understand Bank requirements
 - Property, property, property....
 - Choose technology and supplier carefully
 - Strong understanding of RE resource
 - Clear electricity marketing strategy

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Project finance - contracts involved



EPC, O&M and Equipment Suppliers

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EPC contract terms

- Contractor must be a reputable company and of decent credit covenant

Some key contract terms:

- an obligation on the Contractor to ensure that the Works shall achieve full accreditation under the subsidy regime
- 24 month Warranty Period during which the Contractor is guaranteeing the performance of the system (a given “Performance Ratio” or PR)
- the EPC contractor is to Guarantee the PR with full Liquidated Damages NPV compensation for future loss of electricity and subsidy revenues up to a given cap and with the ability to reject the plant past a minimum guaranteed level.

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O&M contract terms

- Contractor must be a reputable company, provide O&M as core part of its business model and of decent credit covenant

Some key contract terms:

- Range of service scope options up to full maintenance services including preventative and corrective maintenance, cleaning of panels, and maintenance and operational reporting services, in accordance with the original equipment manufacturer O&M manuals, legal and regulatory requirements, insurance requirements and reasonable operating practice
- Overall liability under the contract is generally capped at 100% of the annual price under the O&M
- Compensation paid for failure to achieve Guaranteed Availability/PR for up to 100% of O&M contract price

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Module suppliers and technology

- Technology “families” – crystalline silicon, thin film silicon , thin film non-silicon
- Our view is that all technology families are bankable but not all suppliers bankable

Key issues

- 1,000 modules suppliers in the world?! How many will survive?
- Product and Output Warranties provided but what are they worth?
- Key to managing risk is quality of equipment manufacturing and its transportation and installation
- Robust testing at factory and on delivery is key

Who to chose?

- What does “Tier 1” mean?
- What is a “White List”?

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Inverter suppliers and technology

- 3 technology “families” – micro, string and central inverters
- Inverters must “fit” with the specifications of the panels and grid
- Credit standing of Supplier is key
- Global supply market is evolving – rise of the Chinese ; impact on establishment?
- Value of money analysis of extended warranties can be done
- Failure profile of inverters needs to be agreed with Technical Advisor

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