


Handouts of presentation: Wind Power to the People by Duncan Kerridge, BDCR Ltd, UK

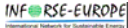


## Wind Power to the People


### Duncan Kerridge

BDCR Ltd

Energy 21 – ‘Community Energy Transition’ Seminar  
August 16-18, 2008, CAT, Wales, UK

 [http://www.inforse.org/europe/seminar08\\_Energy21.htm](http://www.inforse.org/europe/seminar08_Energy21.htm)


Bro Dyfi Community Renewables Ltd



## BDCR activities

- Operate 75kW wind turbine
- Developing 500kW project
- ~200 shareholders, about 60% local - receive annual interest payment
- Elected management committee


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## Aims

- To contribute to and benefit from sustainable energy sources
- To develop renewable energy sources which reduce dependence on fossil fuels and nuclear power.
- To develop commercially viable wind energy installations for local co-operative ownership
- To provide an ethical, environmental investment opportunity


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## BDCR 1 - the story

- **1999** Pantperthog residents and CAT conceive idea of a community-owned wind turbine
- Dulas Valley Community Wind Partnership formed
- Applies through Dyfi Eco Valley Partnership for ERDF grant for 30% of capital costs
- **2000** Initial Lease and PPA discussions held with CAT and landowner
- First public meeting
- **2001** grant from Scottish Power Eco Trust
- Planning application submitted for 50kW machine
- Received planning consent for the wind turbine
- Turbine changed to a 75kW Vestas wind turbine due to planning conditions and exchange rate
- Grant from Energy Savings Trust



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## BDCR 1, continued

- Signing up of land owners concerned in the new site
- Negotiation of terms for electricity sales
- **2002** Order wind turbine and issue contracts for construction and commissioning
- Build community local group membership
- Register group as Industrial & Provident Society
- Attract sufficient share finance
- Installation of road access, foundations, cabling, switch gear etc., followed by the turbine and grid link
- Commissioning the turbine
- **2003** Holding of a public launch event
- Establishment of management board for the Community Energy Fund
- Administration of Bro Dyfi Community Renewables Ltd.

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## BDCR 1 : Vestas V17

- Second hand turbine from Denmark
- Project cost £81,000
- 59 local share holders invested £23,000
- Grants from EU and Scottish Power
- Power originally sold to CAT
- ~120 MWh/yr , 45 homes
- Community energy fund : 30%

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### BDCR 1 Shareholders

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### BDCR 2 : NTK37

#### Repowering Mynydd Glandulas

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### BDCR2 : 500kW Nordtank

- 6 year NFFO3 fixed contract index-linked
- Average production 1,000,000 kWh/yr
- Equivalent to 1/3 Machynlleth households
- 430 tonnes CO<sub>2</sub> saved
- Projected power sales £ 70,000 /yr
- Independent funding for *ecodyfi*

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### Capital costs

Category	Percentage
Purchase and access	24%
Turbine including refurbishment	26%
Construction incl MS4 removal	28%
Contingency & spares	9%
Design, labour & management	9%
Finance and planning costs	4%

Total £328,000

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### Finance - raising the capital

**Equity**  
Investors, REIC

**Loan**  
Finance Wales, 5 years

**Grant**  
MWEA, WDA to *ecodyfi* for shares  
WDA to BDCR

Category	Percentage	Amount
Shares (investors)	53%	£175k
Grant (BDCR)	11%	£35k
Grant (ecodyfi)	13%	£43k
Loan	14%	£45k
Shares (payment)	9%	£30k

Capital cost £328k


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### Share offer

- Through REIC - investment club
- June - Sept 05
- £207,000 pledged
- Over-subscribed £32,000

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### Progress so far

2005


- funding raised
- turbine procured

2006

- legal issues finalised
- gearbox refurbished
- foundation/tower adaptor fabricated
- MS4 removed and Nordtank erected
- commissioning started

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2007

- Failure of 11kV switch
- Protracted negotiations with SP Manweb
- New switch ordered

2008

- additional funding found for switch
- cabin approved and ordered
- switch ready for delivery


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### Challenges

- "Fixed" costs are high for small schemes
- Capital grants often required - deadlines can conflict for multiple funding sources
- Voluntary labour is frequently essential and project may take much longer than expected
- Local solicitors rarely have suitable experience
- DNO (grid operator) may ignore or obstruct efforts to connect
- Banks may not understand funding requirements

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### Benefits

- Investing in a better environment for future generations
- Taking responsibility for producing energy from a local resource - people are no longer just consumers
- Maximising local economic benefits through contacts and reinvestment of profits
- Local people working together

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[www.bdcrltd.org.uk](http://www.bdcrltd.org.uk)

[www.ecodyfi.org.uk/bdcr](http://www.ecodyfi.org.uk/bdcr)

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