

Peak oil and the \$100+ barrel – the effect on renewables

Responding to the challenge – corporates worldwide

Adrian Scholtz, CEO, Green Peninsula



What are corporates doing?

“Enlightened corporates see peak oil as a business opportunity”

- **Global supermarket chain**

Stated aim of 100% green energy supply. Phase 1 involves investing capital in MW scale wind at 6 distribution centres

- **Global retailer**

Investing >€1bn in new RE generation capacity to meet 100% of energy consumption

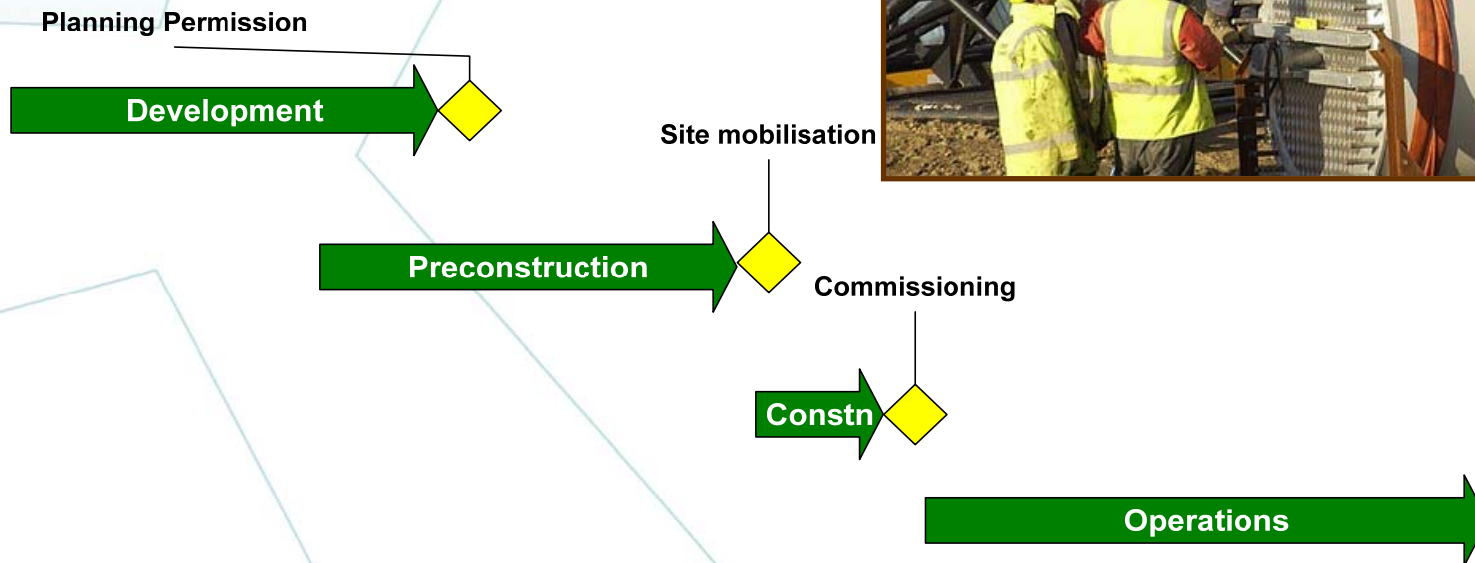
- **International logistics co, hosting on-site wind for major UK retailer**

Logistics company is broadening its service offering

Zero capital for retailer, who receives long term low cost green power

What does Green Peninsula do?

- Advise corporates on RE
- Deliver RE for corporates



5 steps to realising the peak oil opportunity

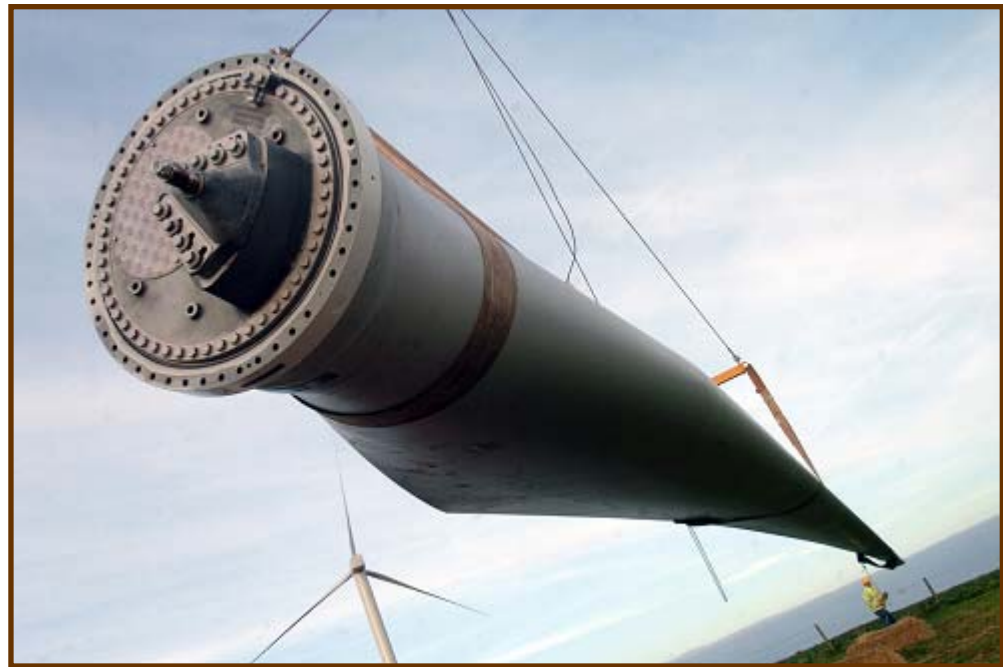
1. Target

2. Strategy

3. Country focus

4. Opportunity

5. Commercial options



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Commercial options and business case for on-site wind

Assumptions	
Turbine	Single 3MW
CAPEX	£3.3m
OPEX	£130k pa
Wind speed at 80m	7m/s
Production	7,000 MWh pa
Output value	£100/MWh

Illustrative P&L and cash flow

Investment	£3,300k
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P&L Account

Turnover (7,000MWh x £100)	£700k
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Costs	(£130k)
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<i>EBITDA</i>	<i>£570k</i>
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Depreciation	(£150k)
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<i>PBT / EBIT</i>	<i>£420k</i>
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80%+

60%

Cash Flow Statement

EBITDA	£570k
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Working capital adjustment	(£60k)
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Tax	(£10k)
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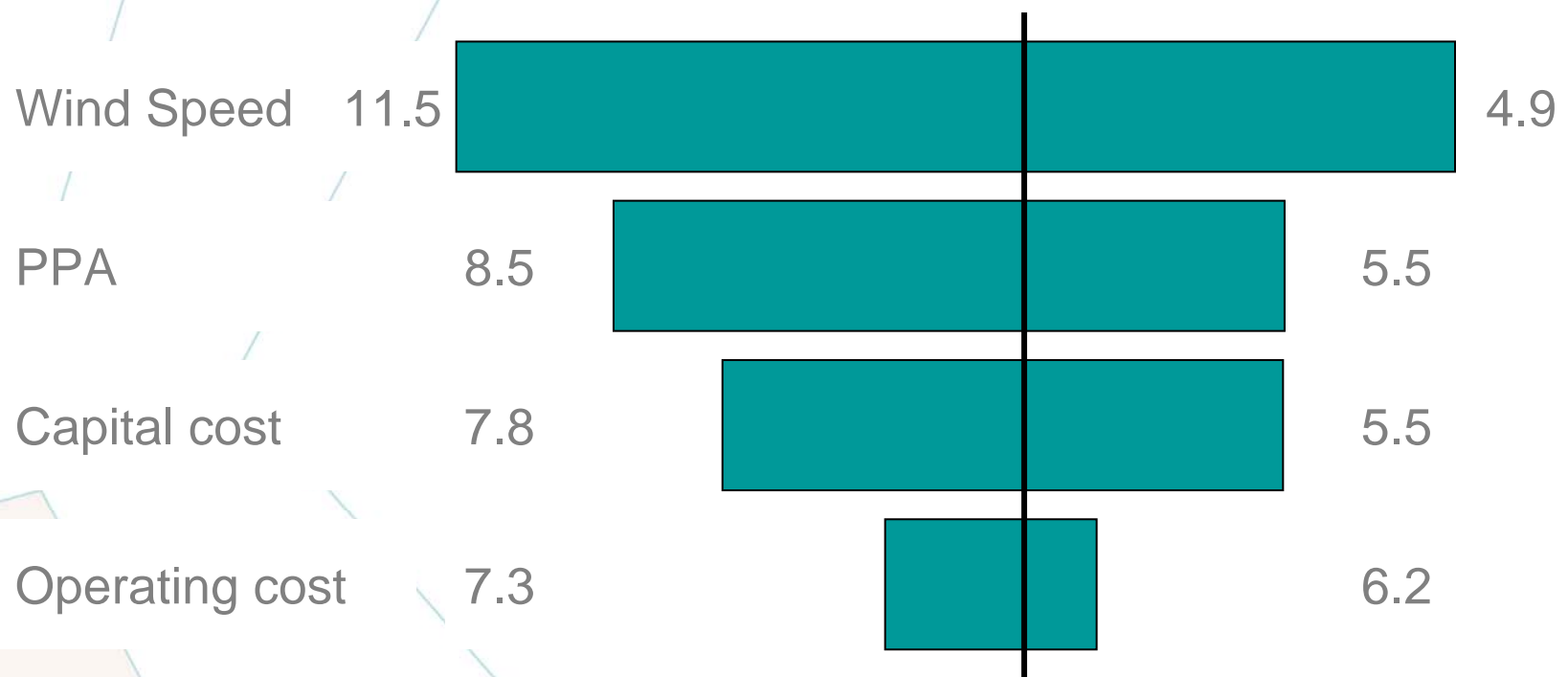
<i>Free Cash Flow</i>	<i>£500k</i>
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Project economics - results

£3.3m invested	
Post tax IRR	12.9%
Post tax Payback	6.6 yrs
Net free cash flow	£500k

Project economics – sensitivities

Impact on payback of a 20% movement in the following:



Base case payback = 6.6 years

Which commercial option?

Do *you* wish to take development risk?

Yes: Invest in renewables

No: Zero investment in renewables

a) Develop asset

b) Assign development rights

4. Zero capital

&/or

Power

Lease

1. Own – self finance

Long-term ownership

2. Own – 3rd party finance

Minimise capital, retain ownership

3. Develop and sell

Realise value

1/ Own – self finance

	1) Export power	2) Use on-site
Industrial plc capital requirement (100% of project capex)	£3.3m	£3.3m
Net free cash flow (<i>year 1</i>)	£500k	£640k
Post tax 20 year IRR	12.9%	18.4%
Post tax Payback	6.6 yrs	5.1 yrs

- You finance development, pre-construction and construction
- ROCs sold to offtaker at market price and LECs retained at CCL value
- Using power on-site assumes all power generated by the turbine can be used, and that the avoided cost of importing power to the site is £75/MWh

2/ Own – 3rd party finance

	1) Export power	2) Use on-site
Level of 3rd party finance (debt) (%)	70%	70%
Industrial plc capital requirement	£1.0m	£1.0m
Net free cash flow (year 1)	£309k	£473k
Post tax 20 year IRR	19.7%	34.4%
Post tax Payback	4.6 yrs	2.8 yrs

- You finance development and preconstruction costs, and minority of construction cost
- Export PPAs must meet lender requirements

Lender interest is more limited for single turbine projects

3/ Develop and sell

	Export PPA
Your investment	£300k
Targeted date of sale	September 2009
Sales price	£1.2m

*£400k per MW
4x multiple*

- You finance development and preconstruction costs to the point where the project is de-risked (i.e. Development asset)
- Recent precedent transactions range between £200k to £1,000k per MW
- You may receive a lease rental post sale, or retain the rights to purchase the power generated on attractive terms – i.e. buy power on-site for £45/MWh (i.e. save £210k per annum if all power is used on site)

4/ Zero capital

	Use 100% on-site
Your capital requirement	£0
Annual power cost saving	£210k pa

The £210k saving should be compared to £640k net free cash flow generated if you choose Option 1 route

- Buy power for £45/MWh under a long term PPA arrangement, saving of £30/MWh
- If the power cannot be used on site, receive a lease
- Any power not used on site should be sold to other sites across your company