



Distributed Generation

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BACKGROUND ON WCE

Established 1996

Offices

- Head Office in Mold
- Offices in Edinburgh, Inverness

Three businesses

- West Coast Energy – wind development
- Atmos Consulting – renewable energy consultancy
- WCE Network Services

WEST COAST ENERGY WIND ENERGY DEVELOPMENT

Track record

- 600 MW
predominantly distributed generation
- 15 sites
including Cefn Croes, Earlsburn and Ben Aketil

Project pipeline

- 700 MW

DISTRIBUTED GENERATION

- 500 kW to 100 MW
- Connected at LV to 132 kV
(England and Wales)
- Predominantly 33 kV and 11 kV

ONSHORE WIND MARKET SIZE

Onshore Wind (2010)	Transmission Connected MW	Distribution Connected MW	Total MW
England	0	3070	3070
Wales	299	1568	1867
Scotland	5877	2876	8753
Total	6176	7513	13690

PRELIMINARY INFORMATION

- Long Term Development Statement
 - Training Courses
 - 11 KV Data
 - GIS Input
- Choice of Connection Site
- Enquiry Process
 - Preliminary Connection Study
 - Feasibility Study
 - Formal Connection Offer
 - Iteration would be useful

CONNECTION OFFER PROCESS

- Application Form
- Turbine Data
- Timescale
 - For production of offer
 - For accepting offer
- Consistency between DNOs

CONNECTION OFFER COSTS

- Lack of Transparency
 - 'Black Box' elements
 - Challenge after construction
before construction?

A role for OFGEM?

- Different between DNOs
- Provision of back up LV supply

RELATIONSHIP WITH NATIONAL GRID

- Exporting GSPs
- BEGA /BELLAs
- Statement of Works
 - Process
 - Costs
 - Transparency
- Securitisation
- Connect and Manage



CHARGING

Generator Distribution Use of System Charges

- Esoteric
- Site Specific
- Communication

Transmission of System Charges

- Threat from National Grid of TNUoS
- Threat of loss of Triad Benefits
- Project Transmit

RELATIONSHIP WITH DNOs

- Culture
- Customer Service
 - Size relative to Demand Customers
 - Account Managers
- Resources
- Partnership



FUTURE

- Smart meters /Smart grids
- Demand side management
 - Electric vehicles
- DNOs to DSOs
- Industry Structure
- Separation to Re- integration?



SUMMARY

- Distributed Generation is important
- Greater Transparency is required
- DNOs – Partnership and resources