

East of England – Leading the way forward for renewables



James Beal, MD, Renewables East



RENEWABLES EAST

- Private, independent company, not for profit
- Established Oct 2003, grant from EEDA
- Turnover £440K 04/05
- Allocated c £3m 08/09
- Two company objectives
 - Regional renewables targets
 - Jobs, money, innovation
- Offices at UEA and Peterborough

Renewables East

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East of England

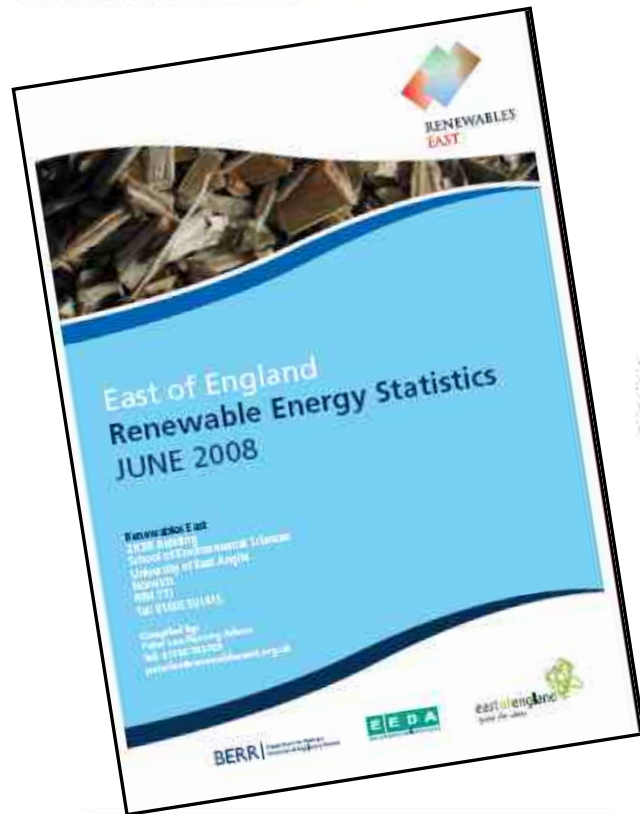
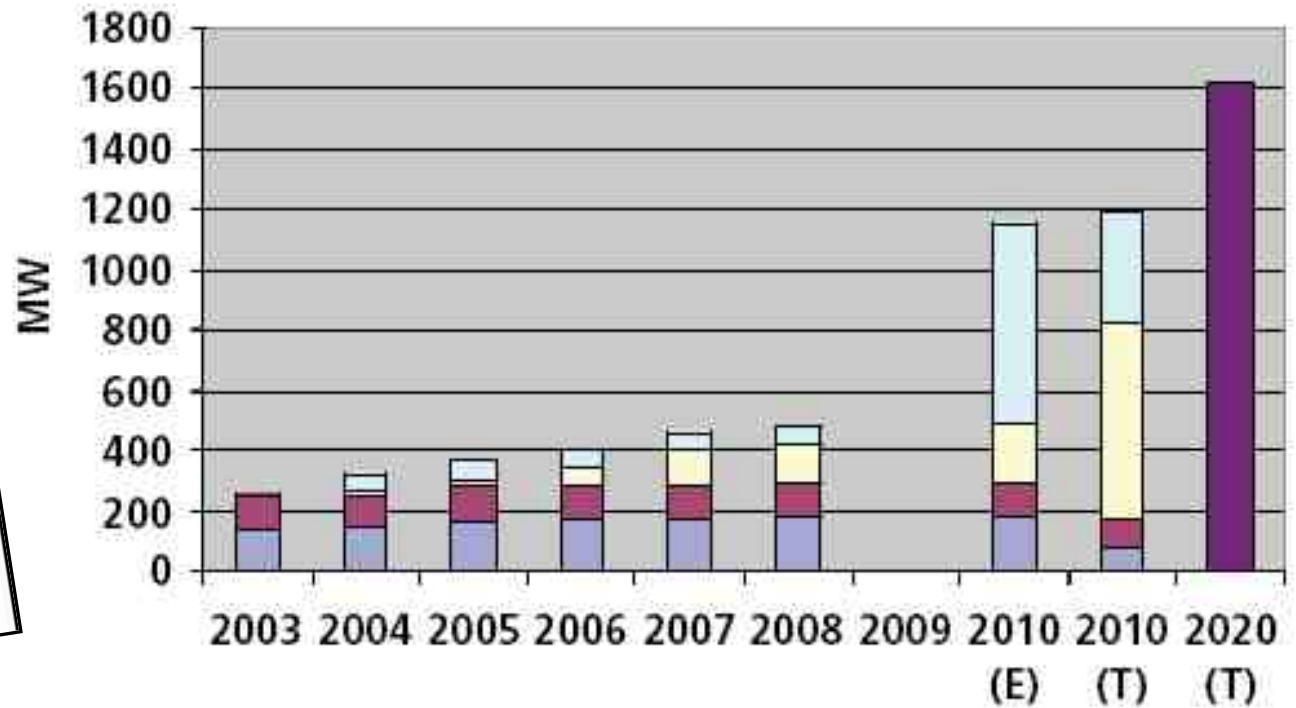
1 of 9 Regions



- £108bn economy (10% UK)
- 5.5m people
- 10% population increase
- UK's ideas region
- highest R&D spend
- 75% of region agricultural
- 25% of region cereal crops
- 7% of region forest
- 14% of electricity from renewables by 2010
- 9% electricity from renewables
- Leading renewable energy
- UK first e85 filling station
- UK first Bioethanol plant
- Circa 500K new homes
- 10% of all new build energy to come from renewables

Renewable Electricity in EoE

- All onshore technologies
- Offshore wind
- Onshore wind
- Biomass
- Landfill gas



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2020 renewable energy targets for the East of England

- Commissioned by Renewables East Jan 08
- Funded by EEDA
- Supported by EERA, EEDA, EA, Natural England, Cseng, UEA, many local authorities
- Evidence base for regional response



REPORT
Primary Energy:
2020 Renewable Energy Targets for the East of England

Report presented to: Renewable East
By: ESD & Anja
Reference: PE1881



Current share of renewables

	Regional consumption	Regional generation from renewables	Percentage of renewables towards regional consumption
Electricity (both other and heating)	28,801 GWh	2,604 GWh	8.9% ³
Transport	54,053 GWh	454 GWh ⁴	0.8% ⁵
Heat	76,158 GWh	460 GWh	0.6%
Total	159,012 GWh	3,518 GWh	2.2%

- Current share of regional generation from renewables is around 2.2%
- Compares well against the national average of around 1.4%
- BUT 2.2% represent an alarmingly small fraction of the 15% target to be met by 2020

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Renewables Potential by 2020

	Electricity	Heat	Transport
Current renewables contribution	8.9%	0.6%	1%
Target for renewables in 2020 (% of category of energy)	61%	10%	5.75% to 10%
Target for renewables in 2020 (% of total 2020 consumption)	12%	4%	2-4%
CO ₂ savings	19%	3%	1-1.5%
Total renewable energy	18% to 20%		
Total CO ₂ savings	23%		

- 25,000 new jobs in region
- >£1billion GVA pa by 2020

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20% renewables by 2020

- Already best region
- Massive offshore wind will drive
- Need support on supply chain risks
- Stretching target for onshore blown and grown
- Pan regional planning support required
- Enhanced ROCs will continue to work for medium to large
- Tariff for smaller onsite and heat projects
- Substantial support for heat required
 - Target off-gas communities,
 - Oil using businesses
 - New build
 - Biogas into grid
- Advanced biofuels through HEIs collaborations

To capture

- 25,000 jobs – approx 1200 at moment
- increase economic activity by £1b pa
- save 23% CO2

East of England Centre for offshore renewables



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Offshore Wind Market – EoE Opportunity



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Legend

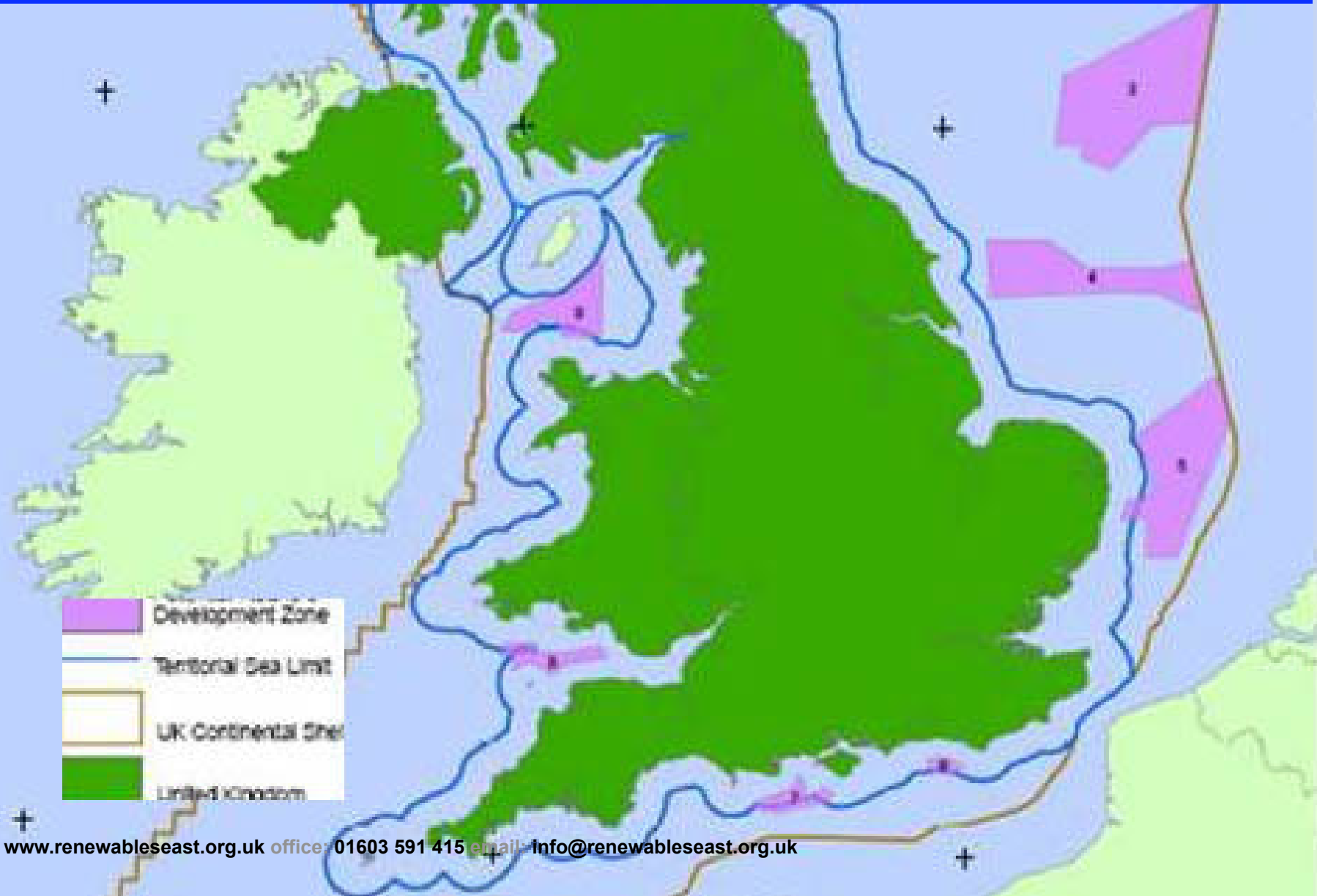
- Round One Projects - Generating/Under Construction
- Round One Projects
- Round Two Projects
- 12NM Limit (as of 18/07/05)
- Isle of Man Waters

Project Name	MW
Scroby Sands	60
Kentish Flats	90
Inner Dowsing	90-108
Lynn	90-108
Gunfleet Sands	108
Cromer	90-108
Gunfleet Sands phase II	64
Humber Gateway	300
Lincs (Inner Dowsing II)	250
London Array – (LAWL) 1	300
Sheringham Shoal	315
Greater Gabbard	500
Dudgeon East	300
London Array – Shell	333
Thanet	300
Westernmost Rough	240
Docking Shoal	500
	367
	500
	1,200
6GW	

Ca. 1,900 WTG's
 = £12Bn
 (@£1.3Mn/MW)
 1-2 year Construction Contracts
 5-20 Operation & Maintenance Contracts
 Marine technologies (wave & tidal) under development



6GW now, plus 25 GW by 2020



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Case Study – JDR Cable Systems Ltd

“ Renewables East’s support, technology understanding and access to market information, was invaluable for JDR in securing the UK’s largest component order for offshore wind.”

Patrick Phelan, Managing Director
JDR Cable Systems Ltd



What Did We Do?

- Scroby Sands Analysis
- Secured funding DTI (now BERR) EEDA ERDF
- Worked with partners for find supply chain capable companies
- Market knowledge and network
- Invested in innovation through PERA
- Invested in lean manufacturing through MAS East

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OrbisEnergy – the place to be



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Orbis Energy will be:-

- Opened by SoS on 7th November
- Physical and virtual centre for offshore renewable businesses
- Populated with new and existing world class businesses
- Airtricity, Seajacks and 4NRG already moving in
- Managed by NWES for the project partners (SCC, WDC, EEDA, ERDF, RE)

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Bioenergy Moving Forward



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Transport Biofuels



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Onshore Wind – A priority





Onshore Wind

- Challenging Targets / Great Opportunity
 - 9MW in 2003
 - 120MW in 2008
 - approx 190MW by 2010
 - approx 910 MW by 2020
- Over last 5 years good progress
- Over 200 MW in planning
- **BUT SIGNIFICANT SLOWDOWN**
 - Over last 12 months poor progress

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Wind Problems

Table 1: Planning decisions- on-shore wind projects, Jan-June 2008 (Source: Renewables East)

Approved by local authority:	Approved on appeal:	Refused by local authority:	Refused on appeal:	New applications
Coldham Extension 12-14MW	Kessingland 6MW	Swaffham Extension 12MW	Guestwick 12MW	Lotus resubmission 6MW
Tilbury 8MW (UDC decision)		Flag Fen 12MW		Hempnall 14MW
		Creek Rd 2MW		Snowmountain 2MW
		Earls Hall Farm 10MW		French Farm 4MW
		QE Hospital 0.8MW		Benington 6MW
20MW	6MW	37MW	12MW	32MW

- Two further refusals coming this week – MOD again
- MOD MOU not having regional benefit



What to DO?

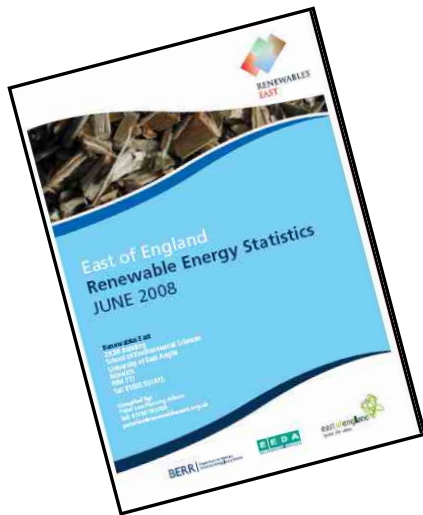
- Replicate SW Onshore Wind Protocol
- RE working on regional planning / training / support
 - Targeting those most in need
 - And those wanting our support
- RE called for:-
 - 20MW Infrastructure Planning Commission limit
 - Regional renewables planning support team
 - Get on with it

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Recent Publications



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