



Growing the Renewable Energy Economy

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The Big Energy Summit

Oulton Hall, Leeds, 26-27th February 2015

About the REA

- The UK trade association for the renewables sector

We are unique, in that:

- Largest trade association (~800 members)
- Members of all sizes – sole traders to multinationals, with a democratic, *one member, one vote structure*
- Cover all renewable technologies, their supply chains and service industries
- Coverage expanded into waste via our composting group
- Activities include lobbying, policy development, information dissemination and promoting the renewable energy sector

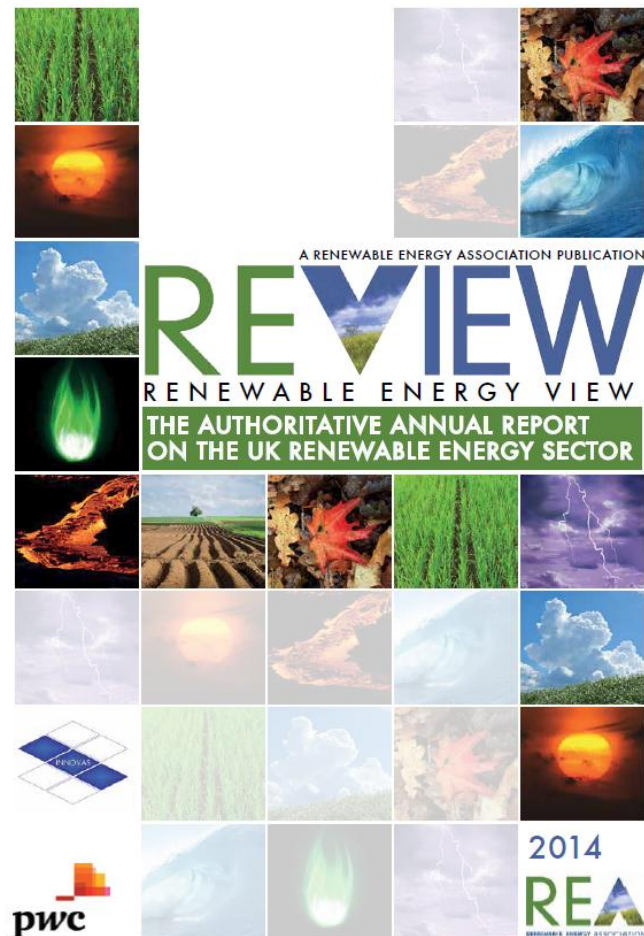


REview

– Renewable Energy View 2014

REA, Innovas and PwC team up to produce industry-leading market report

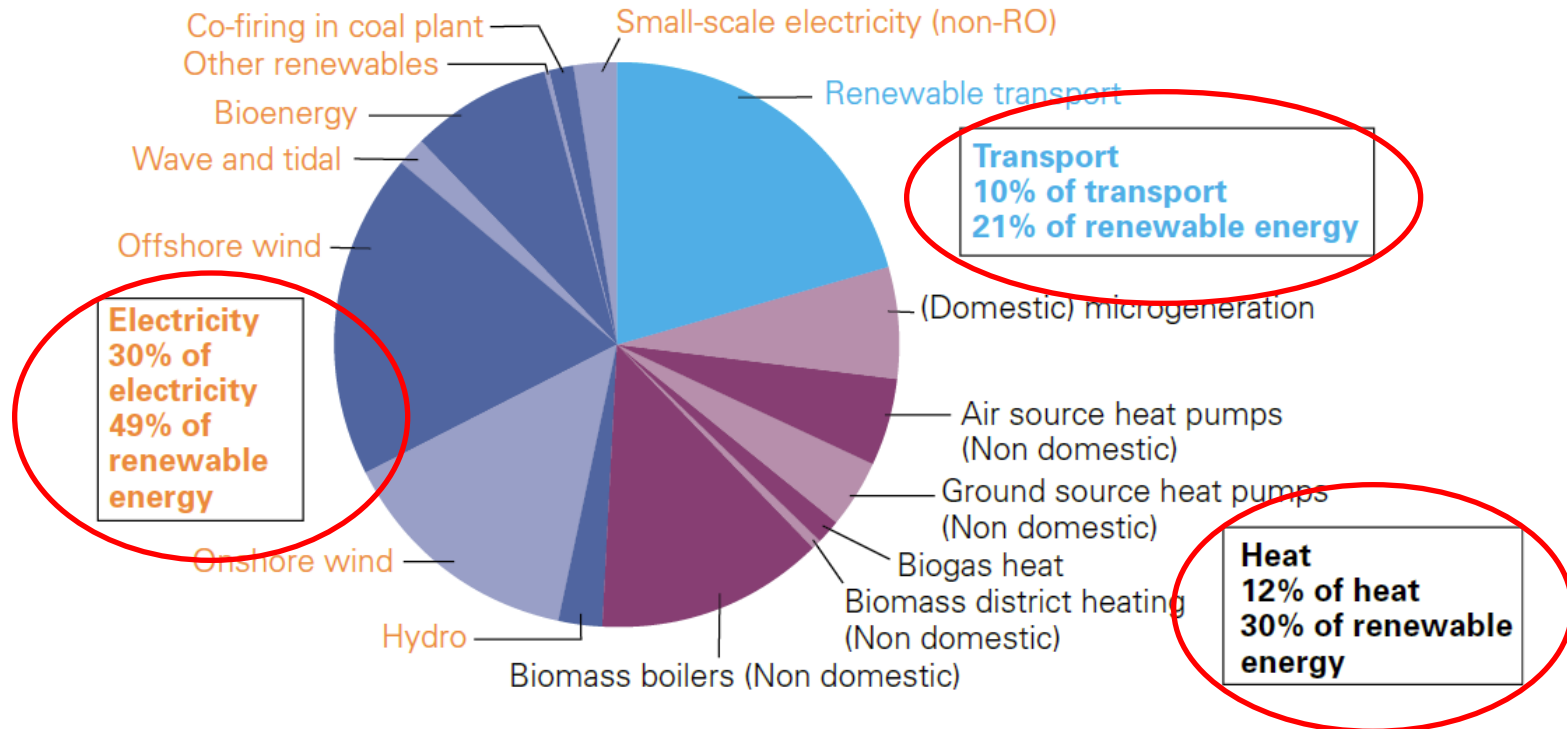
The renewable energy industry has attracted almost £30 billion of private sector investment since 2010. This investment has enabled the industry to sustain over 100,000 jobs in 2013 and deliver 5.2% of UK energy.



REA, Innovas & PwC:
'REview – Renewable Energy View:
2014,' 30th April 2014.
E-book available at: tinyurl.com/kvapyud

UK Gov. Dept. of Energy & Climate Change's (DECC) indicative 2020 mix

Illustrative mix of technologies in lead scenario, 2020 (TWh)



Source: DECC analysis based on Redpoint/Trilemma (2009), Element/Pöyry (2009) and Nera (2009) and DfT internal analysis

Progress against 2009 Renewable Energy Directive

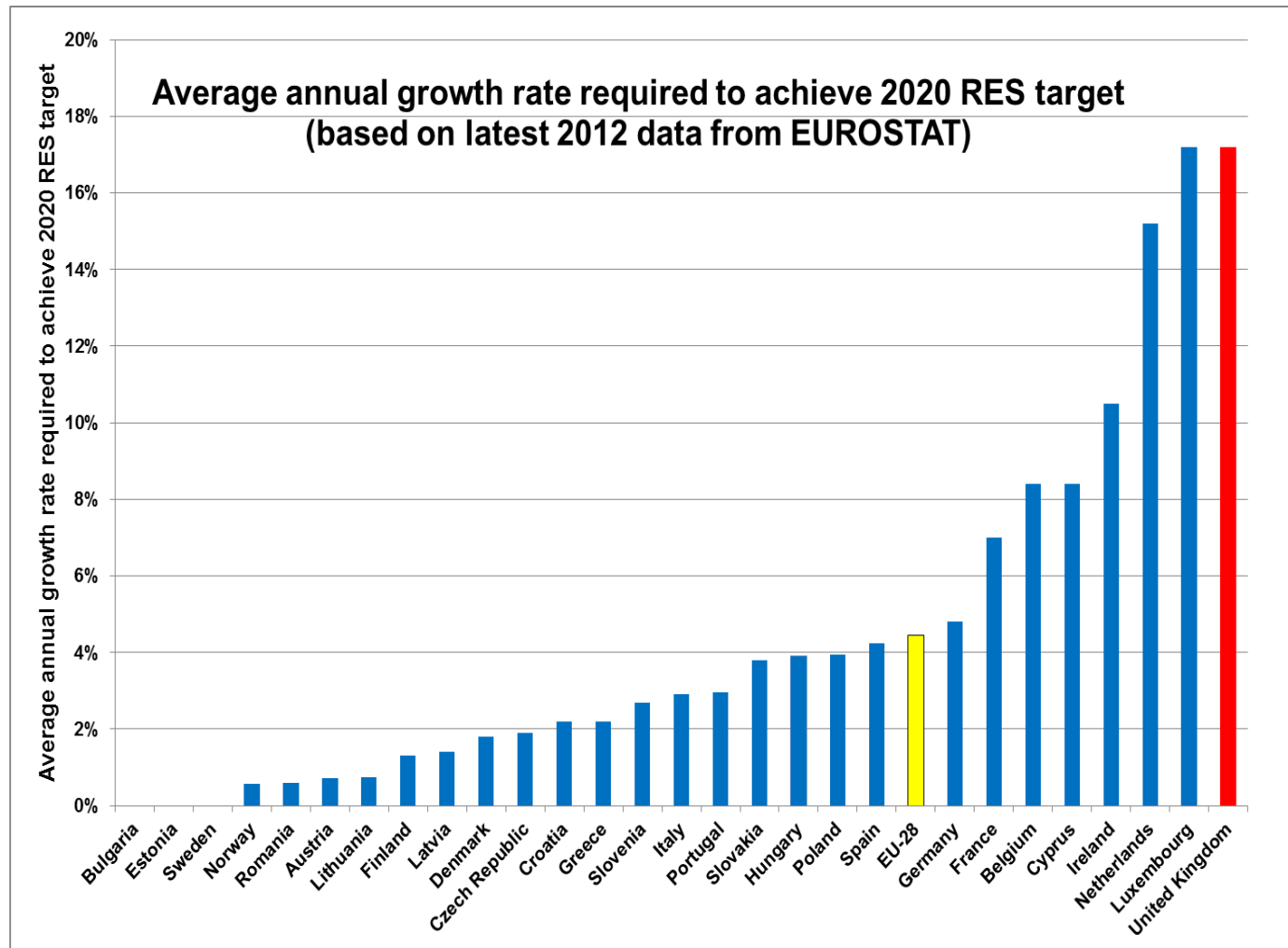


	2005	2006	2007	2008	2009	2010	2011	2012	2013
Percentage of electricity from renewable sources (normalised)	4.1	4.5	4.8	5.5	6.7	7.4	8.8	10.8	13.9
Percentage of heating and cooling from renewable sources	0.8	0.9	1.1	1.4	1.7	1.9	2.3	2.4	2.8
Percentage of transport energy from renewable sources	0.1	0.6	1.0	2.1	2.6	3.1	2.7	3.7	4.4
Overall % renewable consumption*	1.4	1.6	1.8	2.4	3.0	3.3	3.8	4.2	5.2

* the overall headline figure is calculated as a percentage of capped gross final energy consumption using net calorific values (normalised), so not directly calculated from the three sector percentages.



Europe wide: meeting the 2020 challenge!



Note: Malta has intentionally been omitted from this graph; its figure is 28%

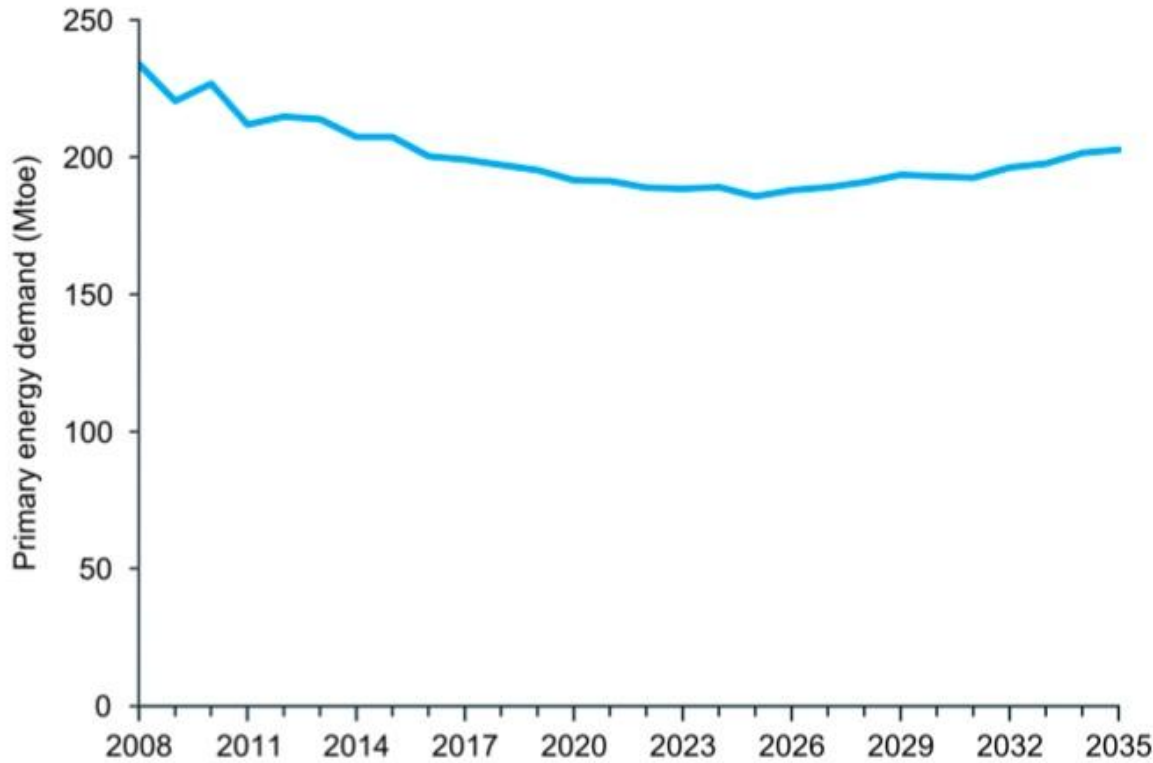
Public Opinion on Renewables remains buoyant (Source DECC, February 2015)

- Overall support: 76%
No significant change in the last 2 years
 - Individual RE sources support stable from Sept 2014:
*Off-shore wind 78%; onshore wind 68%; wave & tidal 74%,
biomass 65%, solar 81%*
- Recognise economic benefits: > 70 %
- Happy with local large scale renewables project: 59%
- Energy security and climate change are now ranked joint fourth in a list of the biggest challenge facing the UK today, up from eighth and ninth places respectively in March 2012.



Projections of Primary Energy Demand

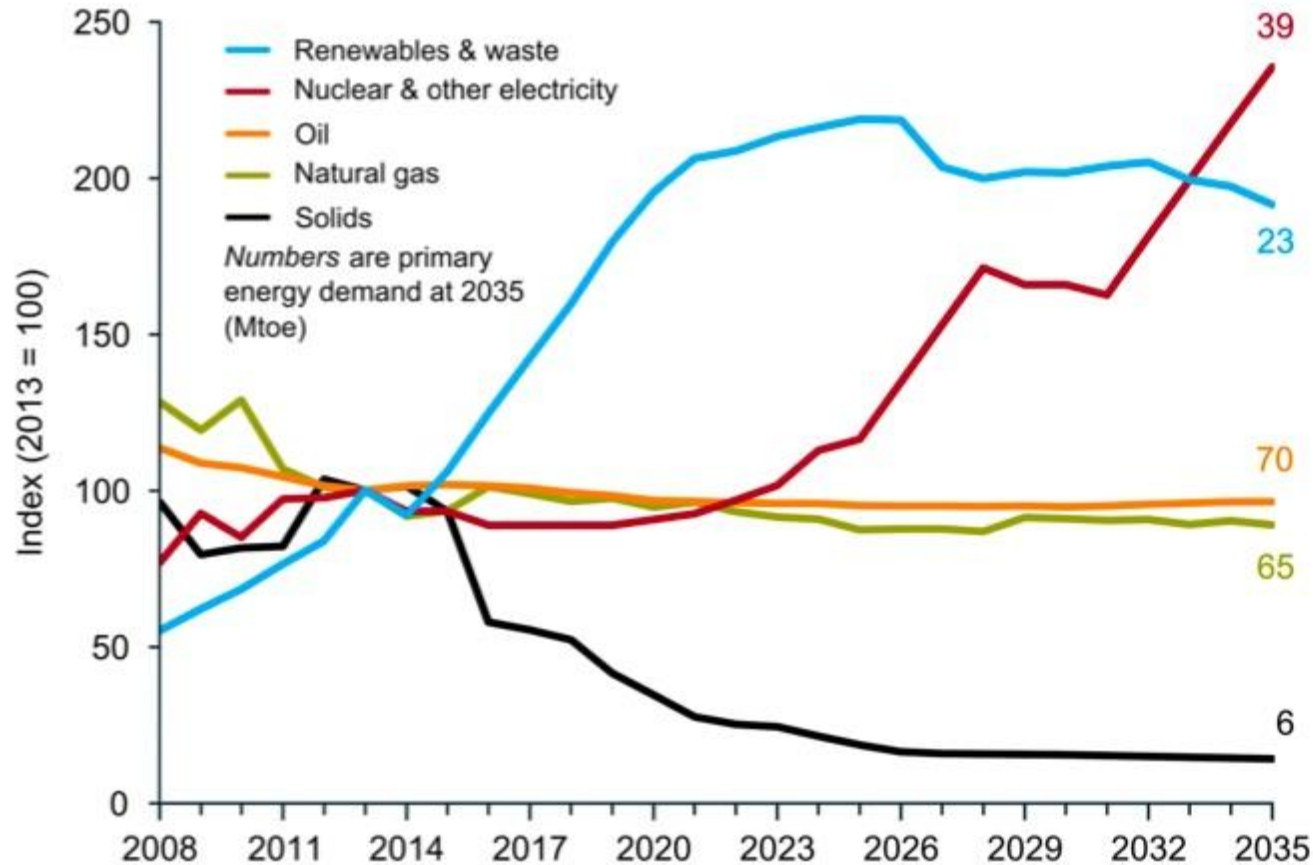
From DECC: Updated energy and emissions projections 2014 (Sept. 2014)



Assumption: Modeling based on “stated” UK energy policy and budget

Changes over time in primary demand by fuel type

From DECC: Updated energy and emissions projections 2014 (Sept 2014)



Summary of projected emissions by carbon budget period

From DECC: Updated energy and emissions projections 2014 (Sept 2014)

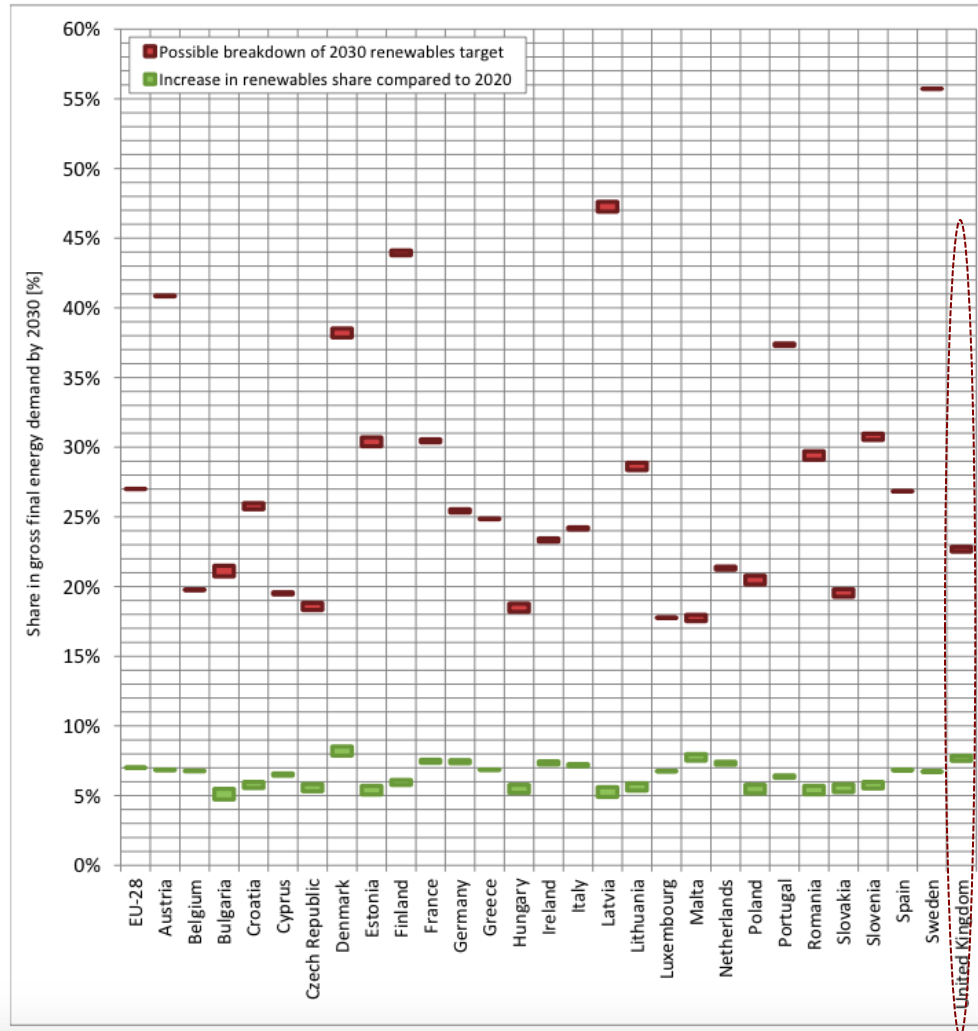
	MtCO ₂ e					
	EEP 2014			Change since EEP 2013 ^a		
	Carbon budget:			Carbon budget:		
	2	3	4	2	3	4
	(2013-17)	(2018-22)	(2023-27)	(2013-17)	(2018-22)	(2023-27)
Territorial emissions	2,686	2,206	1,940	79	-17	-153
Non-traded sector emissions	1,628	1,479	1,393	3	-38	-82
Traded emissions	1,058	727	547	75	21	-71
Net carbon account ^b	2,706	2,464	2,083	3	-38	-82
Carbon budget	2,782	2,544	1,950	-	-	-
<i>Budget shortfall^c</i>	-76	-80	133	3	-38	-82

Notes

Figures have been rounded in this table. Totals are calculated from the un-rounded data so these may appear not to be the sum of the component parts.

- Values for change are the figures from EEP 2014 less those from EEP 2013. Therefore, *positive numbers* indicate that emissions are higher in this edition, *negative numbers* that they are lower.
- The traded sector caps used to calculate the net carbon account for the second and third budgets and fourth carbon budgets are the estimates agreed when the budgets were set. Any agreed updates to these figures will be reflected in future projections.
- Positive numbers* indicate that emissions are over budget; *negative numbers* that emissions are inside the budget.

Allocation of the EU-wide 27% renewable energy target for 2030 to individual member states, applying the 2020 methodology of the European Commission for *effort sharing*



*Note:
increase compared to 2020, see Denmark (8-9%), Malta (~8%) and **UK (~8%)** having the most ambitious national targets of other states*



Announcement today: CfD 1st round auctions



Department
of Energy &
Climate Change

CfD Auction Allocation Round One - a breakdown of the outcome by technology, year and clearing price is as follows:

Technology		2015/16	2016/17	2017/18	2018/19	Total Capacity (MW)
Advanced Conversion Technologies	£/MWh			119.89	114.39	
	MW			36	26	62
Energy from Waste with Combined Heat and Power	£/MWh				80	
	MW				94.75	4.75
Offshore wind	£/MWh			119.89	114.39	
	MW			714	448	1162
Onshore wind	£/MWh		79.23	79.99	82.5	
	MW		45	77.5	626.05	748.55
Solar PV	£/MWh	50	79.23			
	MW	32.88	38.67			71.55

Maximum % Saving on Admin Strike Price for each technology as result of competition

Technology	Admin Strike Price (£/MWh)	Lowest Clearing Price (£/MWh)	Maximum % Saving on Admin Strike Price
Solar PV	120	50	58%
Onshore Wind	95	79.23	17%
EW CHP	80	80	0%
Offshore Wind	140	114.39	18%
ACT	140	114.39	18%

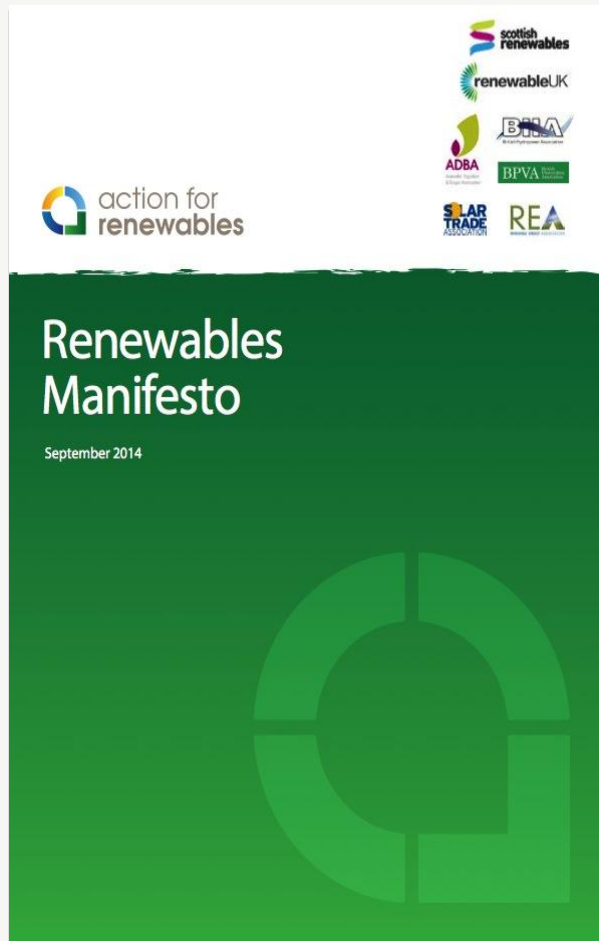
NOTE - Given there are a number of different admin SP and clearing prices for each technologies, the above numbers are based on the maximum difference between clearing and admin SP



Successful bidders and technologies

<i>Project Name</i>	<i>Developer</i>	<i>Technology</i>	<i>MW</i>	<i>Strike Price (£)</i>	<i>Delivery Year</i>
BHEG Walsall	BH EnergyGap (Walsall) Ltd	Advanced Conversion Technologies	26	114.39	2018-2019
Energy Works (Hull)	Energy Works (Hull) Limited	Advanced Conversion Technologies	25	119.89	2017-2018
Enviroparks Hirwaun Generation Site	Enviroparks Operations Ltd	Advanced Conversion Technologies	11	119.89	2017-2018
Wren Power and Pulp	Gent Fairhead & Co. Ltd	Energy from Waste with CHP	49.75	80.00	2018-2019
K3 CHP Facility	K3CHP Ltd	Energy from Waste with CHP	45	80.00	2018-2019
EA 1	Scottishpower Renewables (UK) Limited	Offshore Wind	714.00	119.89	2017-20181
Nearat na Gaoithe	Nearat na Gaoithe Offshore Wind Limited	Offshore Wind	448	114.39	2018-2019
Dorenell Wind Farm	Dorenell Limited	Onshore Wind	177	82.50	2018-2019
Kype Muir Wind Farm	Banks Renewables (Kype Muir Wind Farm) Limited	Onshore Wind	104	82.50	2018-2019
Clocaenog Forest Wind Farm	RWE Innogy UK Limited	Onshore Wind	96	82.50	2018-2019
Middle Muir Wind Farm	Banks Renewables (Middle Muir Wind Farm) Limited	Onshore Wind	60	82.50	2018-2019
Brenig Wind Farm - Brenig Wind Ltd	Brenig Wind Limited	Onshore Wind	45	79.23	2016-2017
Mynydd Y Gwair Wind Farm	RWE Innogy UK Limited	Onshore Wind	40	79.99	2017-2018
Nanclach Wind Farm	Nanclach Limited	Onshore Wind	39.1	82.50	2018-2019
Solwaybank Wind Farm	Solwaybank Energy Limited	Onshore Wind	37.5	82.50	2018-2019
Sneddon Law Community Wind Farm	Sneddon Law Community Wind Company Limited	Onshore Wind	37.5	79.99	2017-2018
Coire Na Cloiche Windfarm	Coire Na Cloiche Windfarm LLP	Onshore Wind	30	82.50	2018-2019
Bad a Cheo Wind Farm	RWE Innogy UK Limited	Onshore Wind	29.9	82.50	2018-2019
Tralorg Wind Farm	PNE WIND UK Ltd	Onshore Wind	20	82.50	2018-2019
Moor House Wind Farm	Banks Renewables (Moor House Wind Farm) Limited	Onshore Wind	16.4	82.50	2018-2019
Achlachan Wind Farm	Achlachan Wind Farm LLP	Onshore Wind	10	82.50	2018-2019
Common Barn Wind Farm	Common Barn Wind Farm Ltd	Onshore Wind	6.15	82.50	2018-2019
Wick Farm Solar Park	Hadstone Energy Limited	Solar PV	19.1	50.00	2015-2016
Charity Farm	Lightsource SPV136 Limited	Solar PV	14.67	79.23	2016-2017
Royston Solar Farm	ROYSTON SOLAR FARM LIMITED	Solar PV	13.78	50.00	2015-2016
Netley Landfill Solar	REG Netley Solar Ltd	Solar PV	12	79.23	2016-2017
Triangle Farm Solar Park	Cambridgeshire County Council	Solar PV	12	79.23	2016-2017

action for renewables: RE Industry “tests”, Manifesto launched 7th September 2014



Six key priorities

In summary, our test of the parties' commitment to a secure, green future rests on six pledges:

- 1) support the Climate Change Act to keep us on course to meet our carbon commitments and back global efforts to tackle climate change
- 2) set a new renewables target for 2030 of 30 per cent of UK energy
- 3) back the independent Committee on Climate Change's recommendation to set a binding target for low carbon electricity by 2030.
- 4) Fund the Renewable Heat Incentive for new applications after 2016
- 5) Boost the UK's Renewable Transport Fuel Obligation to reach the 10 per cent renewable energy target for transport by 2020
- 6) Reform the EU emissions trading schemes to ensure the market takes account of all sector's polluting cost of carbon emission.

Launch of the REA “*Manifesto*”: Friday 12th September 2014



REA MANIFESTO
GROWING THE RENEWABLE
ENERGY ECONOMY



- REA Manifesto supports the RE Industry-wide “6 key priorities”
- Technology Sector “asks” derived from consultation with members ranging from sole trader to multinationals
- Explores progress and policy asks across our core technology groupings: *heat, transport and power*, and, across multiple sectors from waste and recycling to community energy, from energy storage to the views of the finance sector

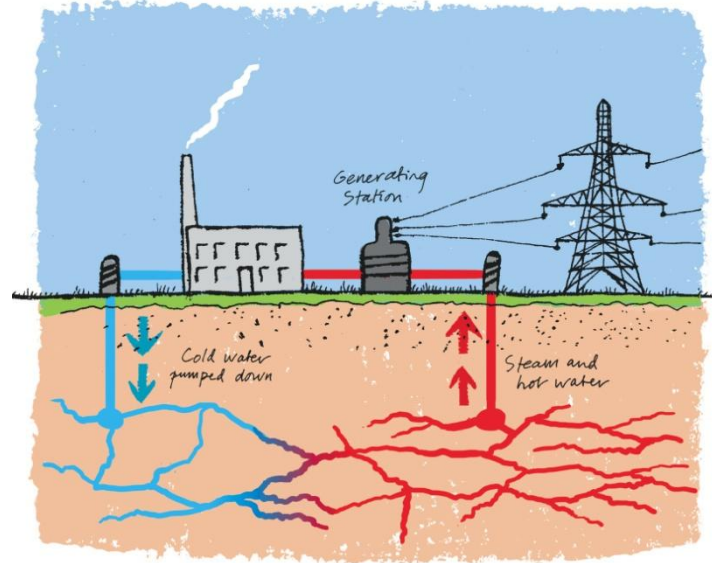
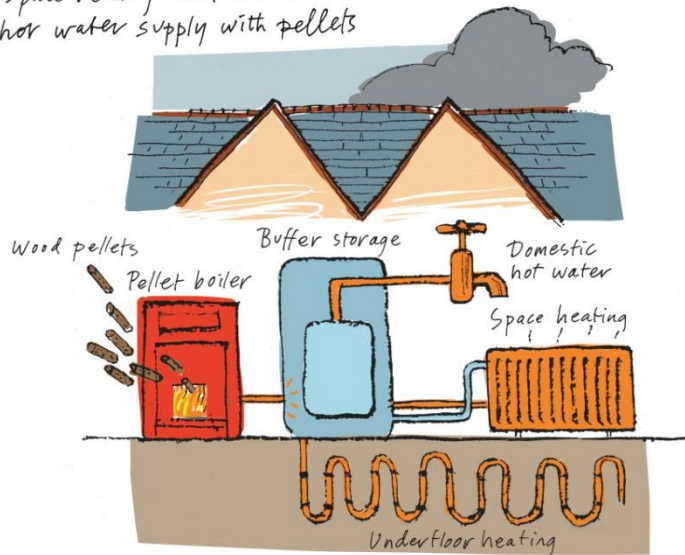


REA Manifesto: 'Growing the Renewable Energy Economy' is available to view online at on the REA website: www.r-e-a.net

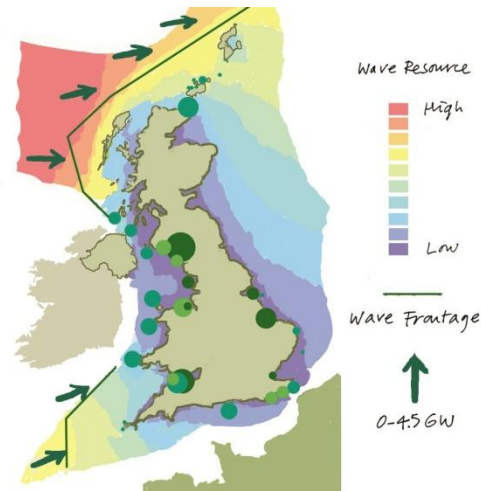
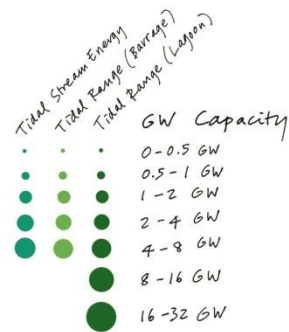
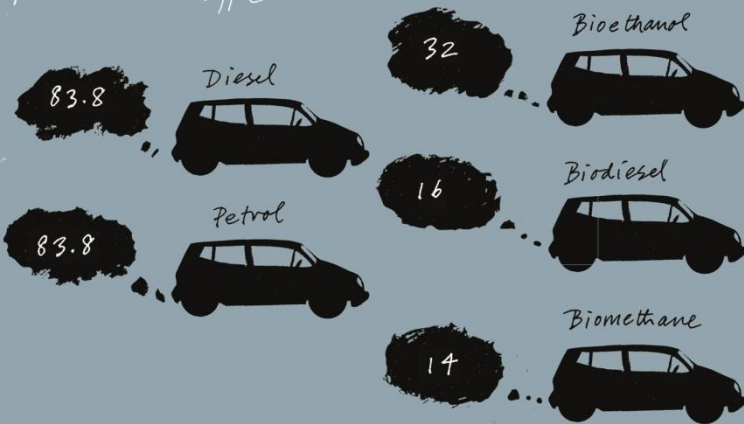


Renewables Technology "Sector" asks

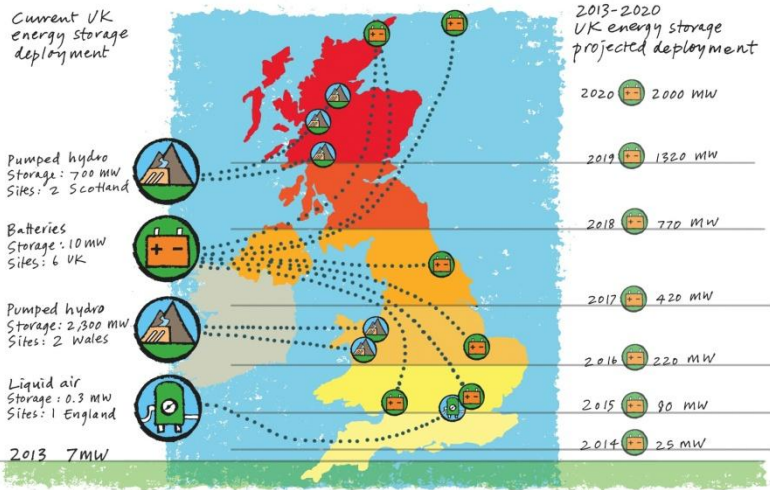
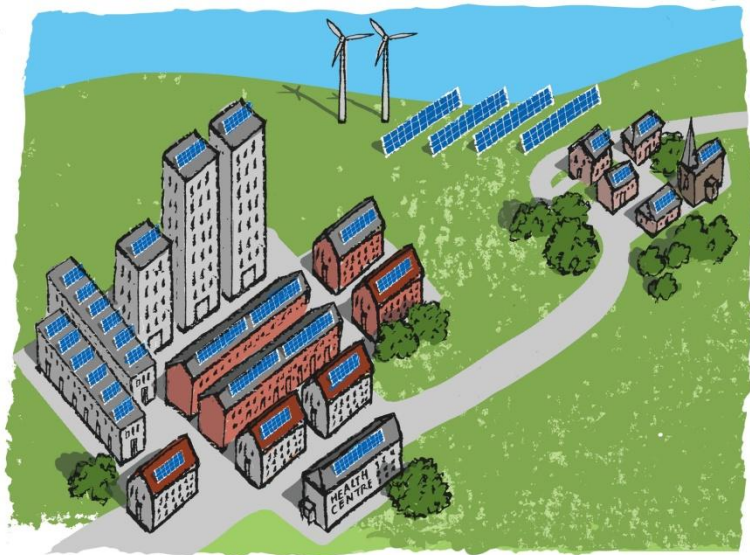
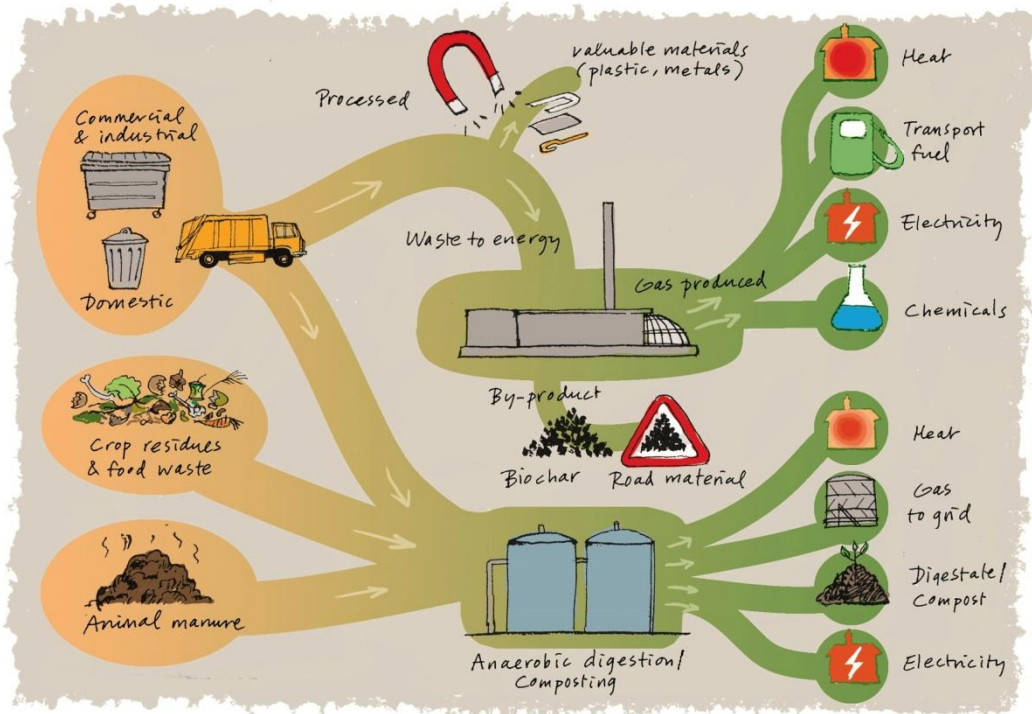
Space heating and domestic hot water supply with pellets



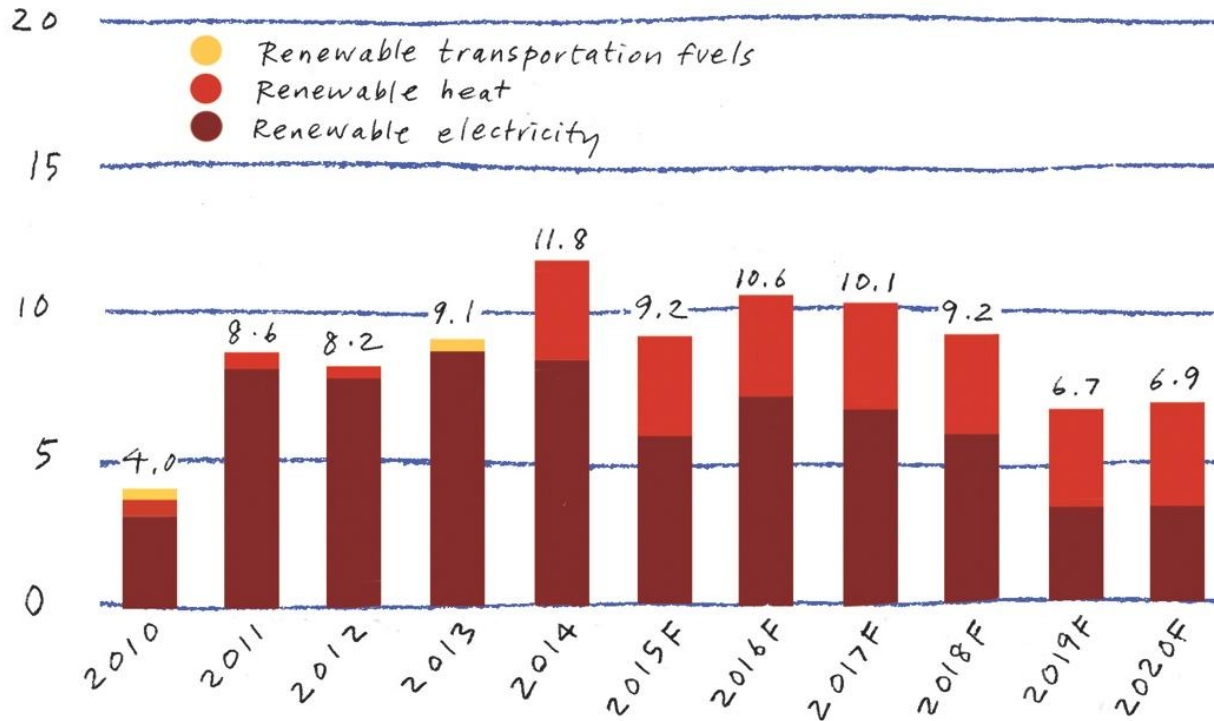
Carbon intensity (CO₂eq/M) per vehicle type



Cross multiple "Sector" asks



Finance Community “Sector” asks



- Stable and transparent policies attract wider spectrum of investors: competitiveness and drives down risk premium
- Simplification of policies- lower upfront costs and reduce cost of finance
- Clarity of key policies to ensure schemes (CfDs, RHI and Fits) are bankable medium to long term
- A 2030 renewable target will prevent hiatus in finance concerns ensuring viable future
- Transition timetable of support schemes (e.g. from ROCs to CfDs) to prevent bottleneck of projects
- Government to work closely with finance sector to improve understanding
- Government departments to speak with one voice on renewable issues

REA best positioned to promote *Decentralised Energy viva activities & forum*

Forum lead: REA CEO



REA Sectors*

- On-site Group
- Biomass Heat Group
- Biogas Group
- Solar PV Group
- Solar Thermal Group
- Heat Pump Group
- Energy Storage Group



What else could accelerate renewable energy uptake? Is there are bigger role for Local Authorities?

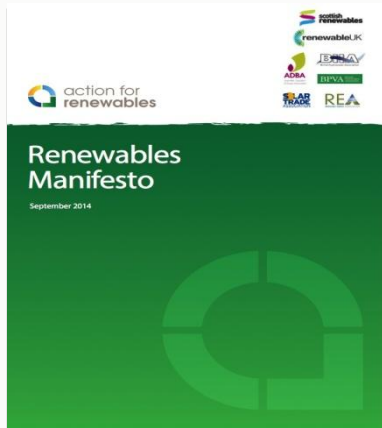
- Clarity, reduced complexity and consistency across all Renewable Energy activities in UK Government an across ALL departments
- For Individuals, business or community (large or small), change from CONSUMER to PROSUMER
 - Accelerate planning and acceptance
 - Learn from the continent
 - Evidence in the UK of innovative financing
 - ... crowd sourcing



Working with



action for renewables: WE are acting for renewables, are you?



Act now! Contact your MP to support the 6 key priorities at:

<http://www.actionforrenewables.org/pan-renewables-campaign/>

Join the REA at our...

Renewable Energy Question Time

10th March 2015, 9:00am

**Location: Wragge Lawrence Graham & Co,
4 More London Riverside,
London, SE1 2AU Open to both REA
members & non-members**

Book Online: <http://www.r-e-a.net/events/renewable-energy-question-time>





THANK YOU

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