

May 2011



**Friends of
the Earth**

Briefing

Electricity Market Reform

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The Government is preparing to make changes to the operation of the electricity market. If they get it right, this could help clawback some credibility in the Coalition's claim to be the Greenest Government Ever.

However, the Government's current proposals will not deliver its own excellent objectives of cutting carbon, ensuring security of supply and maintaining affordability.

To cut CO₂ and stabilize energy bills in the long run, we need to power the UK using the sun, wind and waves instead of depending on imported oil and gas and risky nuclear. Friends of the Earth is calling on the Government to take on the Big Six energy companies and the nuclear and gas industries to back a revolution in the clean renewable energy technologies of the future, not the dirty ones of the past.

With the right policies, the UK can exploit its position as the 'Saudi Arabia' of renewable energy and capture the UK's potential to be a world leader in renewable energy with the new industries, jobs and economic benefits this brings, rather than limping along dependent on foreign energy imports and technologies designed and manufactured by the Chinese, Germans and others.

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What Friends of the Earth want to see from EMR

The Government announced the outlines of its plans for Electricity Market Reform (EMR) in a White Paper in July 2011.¹ Many details need to be finalised before legislation follows in May 2012 at the earliest. Friends of the Earth has five key tests for EMR.

1. Will it cut carbon fast enough and far enough?

The Government's independent adviser, the Committee on Climate Change (CCC), has said that the power sector needs to decarbonise substantially if the UK is to stay within its carbon budget. The CCC says this means that the electricity system should produce no more than 50g of carbon dioxide for every kilowatt-hour of power by 2030.² Ministers have been deliberately fudging this issue, talking about '*largely* decarbonising the power sector *during* the 2030s'. This could mean a higher target, achieved a lot later.

Having signed up to the CCC's fourth carbon budget after an almighty row within the Cabinet, **the Government should now properly commit to 50g CO₂/kWh by 2030.**

2. Will it back the technologies and British businesses of today and tomorrow?

Britain has one of the richest sources of renewable energy in the world. Tapping less than a third of the useable offshore wind, wave and tidal resource could cover all our electricity needs – allowing us to sell the excess to other countries³ – while solar PV alone could meet 30 per cent of our electricity needs.⁴ The renewable energy sector can also generate thousands of jobs – 66,000 by 2020, just from offshore wind.⁵ We're also a world leader in wave and tidal energy companies.

To get all these benefits, EMR must create the conditions for massive investment in renewable energy. **The Government should create incentives in the form of feed-in tariffs suited to renewable energy, to deliver transitional support for these emerging technologies. The Government should model its approach on the proven German model of fixed feed-in tariffs, which guarantees a buyer for all renewable energy generated, at a fixed price. And it should also set out minimum deployment targets for on- and offshore wind, wave, tidal, solar PV, geothermal, biomass and other technologies for the long term beyond 2020.**

3. Will it say goodbye to the energy technologies of the past?

The EMR plans consulted on by the Government earlier this year look like a recipe for reliance on old, outdated technologies that have had their day: nuclear and fossil fuels. Nuclear power, subsidised for half a century, is on course for more – and never-ending – public cash. At the same time, post-Fukushima, countries like Germany are abandoning their nuclear programmes in favour of a 100 per cent renewable future.⁶ And they're reaping the reward for their investment in renewable energy to date. Renewables already supply nearly 21% of German power (compared with just 6.6% in the UK) and Deutsche Bank report that this has led to *lower* wholesale energy prices.⁷

Meanwhile, the gas industry is trying to position itself as the answer to climate change – rather than one of the problems.⁸ Ending our reliance on this dirty fuel – and the volatile price spikes it is prone to – is essential to cut carbon and stabilise energy bills. The charts below, from the Parliamentary Office of Science and Technology⁹, shows how lifetime emissions from gas (even with Carbon Capture and Storage, CCS) are way higher than those from renewable energy – and far above the 50g CO₂ / kWh target.

Fig 1. International Carbon Footprints of Fossil-Fuel Electricity

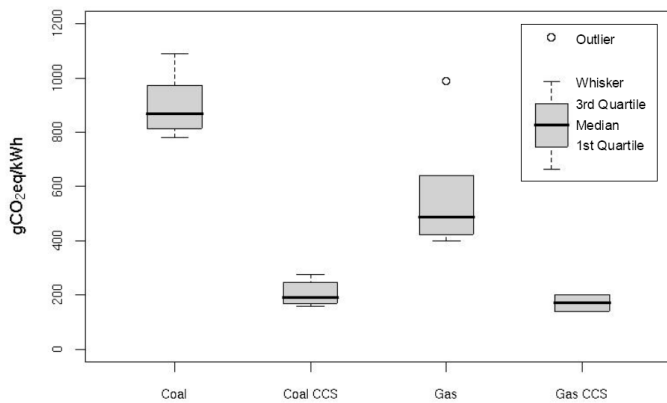
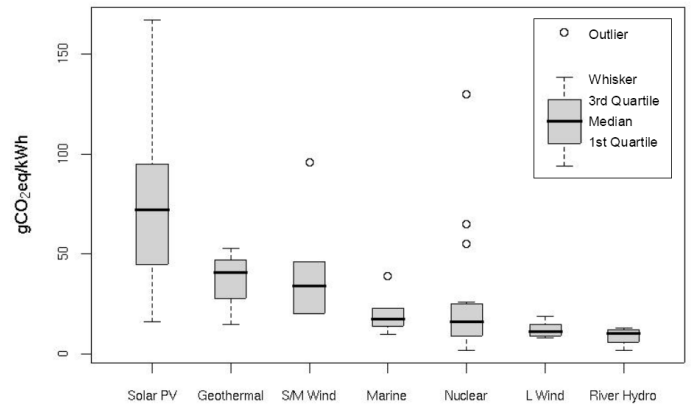


Fig 2. International Carbon Footprints for Low-Carbon Electricity



NB: the different scales on the two charts: every form of low-carbon electricity has a carbon footprint significantly lower than even the lowest estimates for fossil fuels.

The EMR must not continue to throw good money after bad by asking billpayers or taxpayers to cough up for nuclear yet again. But will the Government be able to break the spell the nuclear industry has cast over it? **The Government should keep nuclear out of the proposed feed-in tariff for energy production, and adopt a much tougher Emissions Performance Standard to rule out unabated gas in the 2020s. This would prevent a new ‘dash-for-gas’, and stop us locking our energy system in to dirty gas.**

4. Will it demand less, not more?

The cheapest way to cut carbon and keep the lights on, is simply to use less electricity in the first place. This means ensuring homes, offices and appliances are extremely energy efficient, as well as using ‘smart’ technologies to smooth peaks in demand. The Government’s ‘Green Deal’ promises to insulate homes, but it won’t reduce demand, or help people in fuel poverty, as much as is needed.¹⁰

The Government needs to ensure that EMR puts reducing electricity demand on a par with generating more power. **It should set an overall demand reduction target, explore feed-in tariffs for cutting energy use, and create the framework needed for smart technologies to ‘shift’ demand.**¹¹

5. Will it open up the market?

Just six companies supply 99% domestic energy in Britain.¹² They are ‘vertically integrated’ companies, meaning that they both generate power and sell it on to consumers. Their dominance in the market creates suspicion from consumers and creates a barrier for new businesses trying to enter the market, and creates a lobbying climate which downplays the role of demand reduction and decentralised energy. Between them they have plans for major investments in new nuclear power and fossil fuels. And even though they are big multi-national businesses, it is unlikely that they alone can fund the investment needed in a low-carbon future.

Parliament's Select Committee on Energy and Climate Change has recommended that the Government must use the opportunity of EMR to break the stranglehold of the 'Big Six'.¹³ **The Government must have the courage to go beyond Ofgem's limited proposals,¹⁴ to open up the electricity wholesale market and actively encourage new players, including community- and council-owned power providers.**

6. Will it boost localism and the Big Society?

Our centralised energy system wastes energy through unused heat from power stations and losses in transmission. Generating power in the communities where it is needed can be more efficient. If it is owned by, or for the benefit of, those communities, it can deliver social and financial returns for them too, helping councils or community groups to fund essential services and warmer homes.

The EMR White Paper makes little mention of community energy and outlines even less policy to support the sector. In addition the Government's review of feed-in tariffs for small renewable energy installations has thrown the sector into disarray.¹⁵ **The Government should put this right, ensuring that EMR supports an expansion of decentralised energy, generated, used and owned by householders, local businesses, community groups, housing associations and councils.**

¹ www.decc.gov.uk/en/content/cms/legislation/white_papers/emr_wp_2011/emr_wp_2011.aspx. Relatively little has changed in the White Paper since the Government consulted on its EMR plans, based on four 'pillars' (a rising target carbon price; feed-in tariffs for 'low-carbon' electricity generation, including nuclear, carbon capture and storage and renewables; an Emissions Performance Standard; and payments to ensure that there is sufficient capacity on the system to meet demand) in two consultations: DECC (2010) *Electricity Market Reform: consultation document* and HM Treasury (2010) *Carbon price floor: support and certainty for low-carbon investment*. The implementation of 'carbon price support' from 2013 was subsequently announced in the 2011 Budget. There is a further consultation on the 'capacity mechanism' pillar running until October 2011.

² Committee on Climate Change (2010) *The Fourth Carbon Budget - Reducing emissions through the 2020s* www.theccc.org.uk/reports/fourth-carbon-budget

³ The Offshore Valuation Group (2010) *The Offshore Valuation: A valuation of the UK's offshore renewable energy resource* www.offshorevaluation.org/downloads/offshore_valuation_full.pdf

⁴ Based on utilising the entirety of the UK's practical solar resource, compared with projected electricity demand for 2030, in Committee on Climate Change (2011) *The Renewable Energy Review* www.theccc.org.uk/reports/renewable-energy-review

⁵ Carbon Trust (2011) 'New Carbon Trust research confirms role of offshore wind in delivering UK's Green Growth' www.carbontrust.co.uk/news/news/press-centre/2011/Pages/offshore-wind-gg.aspx

⁶ See www.bbc.co.uk/news/business-12745899 and www.guardian.co.uk/environment/2010/jul/07/germany-renewable-energy-electricity

⁷ www.dbcca.com/dbcca/EN/_media/German_FIT_for_PV.pdf

⁸ www.guardian.co.uk/environment/2011/apr/20/fossil-fuel-lobbying-shale-gas

⁹ Parliamentary Office of Science and Technology (2011) *Postnote update Number 383: Carbon footprint of electricity generation* www.parliament.uk/documents/post/postpn_383-carbon-footprint-electricity-generation.pdf

¹⁰ See www.foe.co.uk/resource/briefings/green_deal.pdf

¹¹ D3 Group (2011) *Electricity Market Reform Consultation Response* www.chpa.co.uk/medialibrary/2011/04/07/e3d63770/110310_EMR_Consultation_D3_final_submission.pdf

¹² www.consumerfocus.org.uk/news/consumer-focus-helps-consumers-by-publishing-energy-complaints-data

¹³ Energy and Climate Change Select Committee (2011) *Energy and Climate Change - Fourth Report: Electricity Market Reform* www.publications.parliament.uk/pa/cm201012/cmselect/cmenergy/742/74202.htm

¹⁴ www.ofgem.gov.uk/media/pressrel/Documents1/RMRFinal%20Final.pdf

¹⁵ www.foe.co.uk/resource/briefings/fit_review.pdf