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Getting Britain working: saving and generating clean energy

EN001 This policy aims for a complete transformation of the energy system to one based on efficient use of energy supplied mainly by electricity from renewable sources. The policy will ensure an affordable and reliable energy supply for householders, commerce and industry in a prosperous and productive economy with excellent employment prospects. It will bring energy bills down; strengthen community control of energy use, supply and costs, and help to eradicate fuel poverty.

EN002 Energy is a key factor in greenhouse gas (GHG) emissions accounting for over 80% of UK emissions. We need to stop energy waste and improve efficiency of use – do better with less. Limiting climate impacts is a powerful reason for using energy more efficiently and changing to low carbon energy sources.

EN003 We can enjoy comfortable homes and a thriving economy using a third of our current energy demand by improving the energy performance of new and existing buildings and by re-thinking industrial processes to reduce the 'energy intensity' of products. Innovation in energy usage will save costs and enable a rapid change to clean renewable power from sources within the UK. Electricity from renewables will replace existing polluting energy sources, ensuring stable prices and removing dependence on foreign fuel imports.

EN004 The energy system will be reorganised to ensure full democratic control, with local communities generating and supplying their own energy needs. Local councils and communities will have a key role in planning efficiency programmes, and organising local energy supply and distribution. Eradication of fuel poverty will be a priority: about a fifth of households currently suffer fuel poverty in the UK.

EN005 Innovation in energy efficiency, renewable energy and energy storage will require rapid training and upskilling of the workforce needed to design, construct, operate and manage radical change to the current energy system. Restructuring the UK energy system will significantly boost employment. Investment in energy efficiency and renewable energy will generate market value in products and innovations worth hundreds of billions of pounds.

EN006 An energy efficiency fund will be supported by an improved system of carbon taxes to help the design, upgrading and construction of better homes and buildings, energy efficient industry and to expand renewables.

EN007 Even so, this policy alone is unlikely to ensure sufficient action on carbon reduction and energy efficiency to avoid dangerous climate change, which require wider changes to production, development, consumption and economics as set out elsewhere in the PSS. For leadership, we must commit to at least zero carbon emissions, and treat all climate targets as minimum thresholds for reduction, reflecting the latest assessment of climate risk. This set of energy targets sit within the wider challenge to put the UK at the forefront of zero carbon, low energy development, enabling the UK to play its part in a sufficient international response to climate change.

EN008 The policies are grouped under a set of primary objectives as listed below

1. Improve efficiency of energy use.

- a) Cut energy costs across all sectors through demand reductions and improved efficiency.
- b) Cut bills and ensure warm homes for all.
- c) Improve the energy performance of all non-domestic buildings.
- d) Lower the energy intensity of industrial processes.

2. Increase clean low carbon energy generation from renewable sources.

- a) Accelerate the production of electricity from renewable sources.
- b) Accelerate the development of heat production from low carbon renewable sources.
- c) Develop heat networks using waste heat and seasonally stored heat for building heating and low temperature heat use.
- d) Prepare land and sea use planning frameworks for the development of renewable energy.
- e) Make carbon capture and storage (CCS) a reality.
- f) Phase out polluting and unsustainable power sources.

3. Ensure secure, reliable and resilient energy supply.

- a) Ensure demand shifting and load balancing capacity.

- b) Develop electricity and heat storage capacity.
 - c) Develop power interconnectors with European partners.
4. Empower energy democracy.
 - a) Separate energy generation from distribution and retail.
 - b) Diversify the ownership of energy generation and ensure democratic control.
 5. Develop low carbon transport.
 - a) Improve energy efficiency of transport.
 - b) Shift transport power sources to mainly renewable electricity.
 6. Stimulate research, development and demonstration:
 - a) - in demand reduction and efficiency techniques and materials;
 - b) - in renewable energy production;
 - c) - in energy storage and demand balancing technologies.
 7. Ensure skills for the transformation are in place.
 - a) Ensure rapid development of skills required for demand reduction and energy efficiency.
 - b) Ensure the skilled workforce needed for the change to low carbon energy is provided.
 8. Make sure regulation of the energy system is fit for purpose.
 - a) Ensure regulations require improving standards of demand reduction.
 - b) Improve the regulation of energy supply.
 9. Provide the means for financing the energy transformation.
 - a) Stimulate demand reduction and efficiency.
 - b) Establish measures for funding the change to renewable energy.
 10. Strengthen international energy policy.
 - a) Work to reduce global anthropogenic greenhouse gas concentrations.
 - b) Support development of carbon sequestration.

Improve efficiency of energy use

Policy

EN110 A green Government would cut energy costs across all sectors through demand reductions and improved efficiency. We will set clear and consistent targets and timetables for improving efficiency and reducing greenhouse gas (GHG) emissions across all sectors of the economy. We will require energy use for space heating, and electrical use to be reduced by a third by 2020, by half by 2030 and by two-thirds by 2050, based on 2012 final energy demand levels. Specifically, we will aim to reduce total UK energy demand to 900 TWh/year by 2030, and to 600 TWh/year by 2050, i.e. reductions of approximately 40% and 60% respectively on 2012 final energy demand.

EN111 We will keep the effectiveness of demand reduction and efficiency policies under regular review.

EN112 The Green Party will provide local councils with the powers and resources to develop energy plans for their areas. These plans will be aligned with national demand reduction, energy efficiency and energy generation targets (see EN110 above). Local councils will be required to:

- a) link energy policy to local housing and transport plans, as well as social and economic issues;
- b) encourage take-up of energy efficiency investment (through varying council tax rates for example);
- c) engage local communities in the planning process for demand reduction and renewable energy generation in their areas;
- d) manage the phased withdrawal of natural gas for building heating.

EN113 We will extend the scope of local authorities' planning powers to include energy (through Local Development Frameworks for example). Specifically they will decide - in consultation with local communities - the extent and scope of demand reduction programmes, the location of heat networks, community scale energy (heat and power) sources, and energy storage capacity.

EN121 A green Government would cut bills and ensure warm homes for all by ensuring that all new dwellings (including conversions) are built to zero carbon standards. However, at least three-quarters of existing housing stock (27 million dwellings) will remain in 2050, thus 'retrofitting' existing property is crucial to reducing demand. We will plan to reduce the energy demand in existing dwellings through intensive retrofit programmes. The programmes will focus first on improving housing conditions and reducing the energy costs of poorer households, particularly those suffering fuel poverty. Energy policy for housing will be focused on area-based programmes

linked with housing improvement policies and initiatives for bringing vacant dwellings and commercial properties into use. Domestic demand reduction will be supported by targeted grant regimes to ensure take-up, with special attention to poorer households and those suffering fuel poverty. Subsidised loans will be available to improve 'hard to treat' homes. Special care will be taken with 'traditional buildings' to avoid installation of inappropriate measures.

EN122 Specifically, the aim is to improve the energy performance of up to 25 million dwellings thus reducing their energy demand by an average of 40% by 2020, 60% by 2030 and 80% by 2050 on 2009 levels.

EN123 Tackling fuel poverty requires a comprehensive range of policies and practical interventions across a number of areas. The Green Party will tackle fuel poverty through ambitious infrastructure programmes to improve the energy efficiency of homes (in particular, where condition is a factor in fuel poverty by 80% by 2020 on 2009 levels), and involve local authorities in the delivery of these programmes. We will also review the effectiveness of energy regulation to ensure that regulatory bodies have the appropriate objectives, duties, powers and resources to carry out their functions in relation to environmental objectives and the protection of the interests of current and future energy consumers, including the eradication of fuel poverty (see [EN821](#)). The above energy-related policies will be combined with other policies, particularly those relating to income and benefit levels, housing and health, in order to tackle and eradicate fuel poverty. (see [EC680](#), [HE100](#), [HO501](#), [HO502](#), [HO605](#), [SW101](#)).

EN124 A Green government will help reduce fuel poverty by mandating that all domestic tariffs are progressive, i.e. a lower use of energy attracts a lower cost per unit than higher usage. Lower energy tariffs will be set at a level to ensure that homes have access to a basic level of affordable energy.

EN131 A Green government will ensure better energy performance in buildings in the non-domestic sectors. We will support better energy management, design, construction, and innovation in materials, plant and components to achieve improved building performance and operation in the non-domestic sectors. Efficiency measures will be supported through a combination of regulation and incentives. Policies will apply equally to retrofit and new build. Small businesses may require specialized support, in the form of advice services linked to grant and loan schemes, to assist them to reduce energy costs and improve the energy efficiency of their operations. These arrangements will be part of the local authority energy planning process and integrated with local economic development programmes.

EN132 Many existing non-domestic buildings will last through 2030, with at least 60% remaining in 2050, thus efficiency policy must address retrofit as a priority. Target final demand reductions on 2012 UK levels are 30% by 2020, 40% by 2030 and 75% by 2050, allowing for increases in floorspace.

EN133 We will support neighbourhood and area-based upgrading of the energy efficiency of buildings through cooperative or collective action. Regulations to prevent leasing or renting buildings that do not meet basic energy standards will be progressively tightened and extended to a wider range of buildings. Tenants in all sectors will be enabled to require building owners to upgrade the energy performance of the buildings they occupy.

EN140 The Green Party will work towards lower energy intensity of industrial products. We will encourage better energy management and process efficiency. We will support research and development of more efficient process technologies, alternative fuels, materials recovery and recycling in order to drive down energy demand in industry and reduce the energy intensity of products. We will focus action on major energy users such as the chemical and food and drink industries, while smaller firms may require specialised support as in the commercial sector above.

EN141 We will target energy efficiencies for the UK industrial sector of reductions on 2012 levels of 15% by 2020, 33% by 2030 and 60% by 2050 allowing for increases in productivity over the period.

Increase clean low carbon energy generation from renewable sources

Policy

EN210 A Green government will accelerate production of electricity from renewable and low carbon sources. We will rapidly develop new renewable energy capacity to meet reducing final energy demand, (see EN110), primarily through clean electricity generation (see EN211-215 below). We

will mandate a target to reduce carbon intensity of power generation to a maximum of 25gCO₂e/kWh by 2030 and to implement an emissions performance standard reducing in regular intervals to that level by 2030, with flexibility to adjust the carbon intensity target towards an average of 10gCO₂e by 2030. Wind will provide the main source of power by 2030, followed later by wave and tidal power. Solar thermal, photovoltaics and hydropower will be important because of their potential for local and small-scale generation.

EN211 We will aim for a largely electricity-based energy system in the UK to match a total final demand of about 900 TWh/year by 2030, which reduces to 600 TWh/year by 2050. To meet this demand, installed capacity for renewables is planned to be capable of providing 600 TWh/year by 2030, rising to 750 TWh/year by 2050, excluding power for demand balancing and load shifting. This capacity will be provided by the range of renewables set out below.

EN212 We will accelerate the deployment of both onshore and offshore wind power generation at rates sufficient to ensure the change to a stable electricity-based energy system of 97 GWp (GigaWatt peak) by 2030 (255 TWh/year), but stabilising thereafter. This will require a rapid build of onshore wind to 2030 to provide an installed capacity of 37 GWp (97 TWh/year) by 2030, and off-shore wind generation capacity will be increased to 60 GWp (158 TWh/year) (including existing and currently planned capacity).

EN213 We will support the rapid commercialisation of tidal stream and wave-powered generators to ensure there is installed capacity of at least 15 GWp (39 TWh/year) each by 2030, and a combined installed capacity of at least 60 GWp (158 TWh/year) by 2050.

EN214 Rapid deployment of solar photovoltaics will be fully supported, as a key source of decentralised generation, making full use of domestic, commercial and industrial roof-space and limited deployment of 'solar farms'. We will review legislation and planning guidance to facilitate the potential for leasing roof and site space for local energy generation by third parties. We will target installed capacity of 53 GWp (70 TWh/year) from PVs by 2030 and 66 GWp (87 TWh/year) by 2050.

EN215 We will urgently review UK potential for hydropower and will support in particular medium and small-scale installations in order to provide 6 GWp (26 TWh/year) of installed capacity by 2030. We will develop the capacity of pumped storage for demand balancing, subject to stringent environmental safeguards.

EN216 We will keep under review the relative contributions of all renewable sources in order to assess the potential for replacement or enhancement of the different technologies, in particular as demand reduces further beyond 2030 due to increasing efficiency.

EN220 A Green government would also accelerate the development of heat production from low carbon renewable sources through the deployment of renewable heat sources including heat pumps (air and ground source) and solar thermal as well as heat from decentralised biomass/biogas generation. We consider renewable heat can produce 160 TWh/year (thermal) by 2030, and 200 TWh/year by 2050.

EN221 We will ensure energy produced from biomass, including biogas, yields reductions in greenhouse gas emissions using sustainable wastes and domestic feedstocks for which indirect substitution emissions can be shown to be minimal. We will ensure that biomass generation, uses sustainably-sourced fuels produced according to stringent sustainability standards and is as far as possible carbon neutral.

EN222 We will develop the use of biomass for heat supply through co-generation and for balancing power; new biomass power stations will be built as combined heat and power systems and if needed with carbon capture and storage capability.

EN230 We will ensure the development of heat networks using waste heat and seasonally stored heat for building heating and low temperature heat use.

EN231 We will give local councils responsibility for heat planning as part of their energy planning powers. They will plan and commission new heat networks using low or zero carbon heat sources, funded through discounted loans from an energy efficiency fund (see EN910 below). Networks will include heat storage capacity to even out seasonal variations. Buildings that could be served from the heating network will be liable to pay charges for network access once it is built and available for connection. Local authorities may directly operate heat networks or energy service companies, or assist local co-operative or private organisations to do the same. They will be given powers to introduce incentives and bylaws to phase out the use of natural gas boilers.

EN232 We will support the development of a low-carbon heat market for the heating of homes and

other buildings where there is sufficient density of demand to support the creation of a hot water network. Local authorities will be responsible for the planning of the network (see EN231). The heat network will be treated as a regulated asset and investors will be assured a regulated rate of return paid for by owners of buildings connected to the network.

EN240 The Green Party will ensure the urgent preparation of sea use planning frameworks, in consultation with relevant agencies, to guide the development of marine renewable energy systems. We will review land and marine planning guidance and establish a presumption in favour of renewable energy installations, in particular mid-scale community-owned installations. Energy-related planning guidance, local energy plans (see [EN112](#)), energy-based regulations, and proposals for renewable energy installations will be required to be assessed under environmental impact assessment legislation to ensure that wildlife and biodiversity, landscape and heritage value are protected and the needs of local communities safeguarded. We will provide resources for collating the monitoring of renewable energy installation impacts to enable continual updating of environmental best practice. We will require local councils to integrate their energy plans with national land and sea use planning guidance.

EN250 We will assist in making carbon capture and storage (CCS) a reality by investing in the testing of commercial-scale CCS technology and will encourage bids for EU funding (such as NER300) to ensure that the UK secures a leadership position and competitive advantage in both the development and deployment of CCS technology.

EN251 If CCS is proven at a commercial scale, we will support deployment of the technology, on a specifically transitional basis, to existing sustainable biomass and gas power stations and existing incineration plant. We will support deployment on a long term basis for sustainable biogas generating plant.

EN260 A green government will phase out polluting and unsustainable power sources.

EN261 We will cancel construction of new nuclear stations and nuclear power will not be eligible for government subsidy; the Green Party opposes all nuclear power generation and is particularly opposed to the construction of new nuclear power stations. Cancellation will avoid the costs and dangers of nuclear energy and waste being passed on to future generations long after any benefits have been exhausted.

EN262 Money earmarked for new nuclear plant research, development and construction will be reallocated to energy efficiency measures and renewable energy infrastructure, but sufficient funding for decommissioning redundant power stations, and for research into the safe storage or disposal of existing radioactive waste stockpiles will be retained.

EN264 We will halt the development of coal-bed methane, shale gas and similar hydrocarbon exploitation since it is not needed to meet UK energy demands, is environmentally destructive, and will lead to increasing GHG emissions.

EN265 Incineration of municipal, commercial and industrial waste is not required for energy generation, therefore all existing waste incineration stations will be phased out as soon as possible.

Ensure secure, reliable and resilient energy supply

Policy

EN310 A Green government will ensure demand management and load balancing capacity: security of energy supply will be achieved as power generation changes to UK-based renewables. We will ensure that the transmission and distribution of energy keeps pace with the change to renewable energy production, as well as the restructuring of supply resulting from policies in EN 410 et seq. below, and as the increasing amount of decentralisation due to local and microgeneration impacts on the system. We will ensure the changing requirements for demand management and load balancing are accommodated and reliable energy supply guaranteed.

EN311 Local system operators will be given the responsibility for managing local storage and incentivising provision of local demand management techniques to manage the fluctuations in supply and demand of energy in their areas. We will support the installation of genuinely smart meters in all buildings linked to smart appliances (such as smart fridges and air conditioning) that will automatically respond to fluctuations in supply and demand to minimise energy use and align periods of heavy usage with times of low cost, according to user preference.

EN312 We will ensure the development of energy storage capacity through investment in

development and deployment of the energy storage capacity needed to balance daily and seasonal demand fluctuations.

EN313 We will consider electricity and heat storage in a separate subsidy or investment category from generation, transmission, distribution and supply in order to ensure rapid deployment and will adapt market mechanisms to ensure storage at the distribution level is valued both for its role in network reinforcement and in electricity trading.

EN320 A green government will develop power interconnectors with European partners and will invest in the electricity interconnectors needed to provide international flows of renewable power for balancing fluctuating energy demand, in cooperation with countries such as Iceland (with substantial geothermal power resources), Norway (with considerable pumped storage capacity and hydropower supply) and Ireland (with substantial wind power potential)

Empower energy democracy

Policy

EN410 A green government will separate energy generation from supply and retail.

EN411 We will legislate to separate large energy generators from suppliers. The price of power will continue to be set according to the wholesale market where we expect the majority of electricity to be traded. Renewables (wind, wave, tidal stream, solar and hydro) will receive a fixed price feed-in tariff. Flexible renewable generators that can decide when to operate (biogas, tidal stream) will receive a premium feed-in tariff to incentivise provision of capacity at times of peak demand. Demand reduction will be incentivised through demand-side feed-in tariffs available to customers and third parties acting on behalf of customers, working alongside the system of tradable energy quotas (see CC290). We will remove existing market barriers that prevent demand-shifting by large energy users and aggregators working on behalf of or supplying small end-users. Community and decentralised generation will be supported by fixed price feed-in tariffs. All of the above feed-in tariffs will be reduced gradually, in accordance with each technology's cost reduction curve. Sufficient time between the announcement of revised tariffs and their implementation will be provided for industries to plan for any reduction in tariff rates.

EN412 The Green Party will outlaw ownership of energy retail by profit making companies that have a stake in energy production, unless the generation is wholly renewable. The current pattern of vertical ownership has worked to concentrate market power into an oligopoly, to the detriment of energy conservation and price competition. Vertically-integrated energy companies will be required to divest their ownership in energy retail (currently the least profitable aspect of the energy industry). Energy retail will be conducted by community-owned, municipally-owned or cooperative not-for-profit regional monopolies and we will require open-book accounting practices to ensure fair pricing, sufficient investment and good value for consumers.

EN420 We will encourage the ownership of decentralised energy production and energy saving by community and municipal companies. This will be enabled through favourable supply and demand feed-in tariffs as well as relief from all transmission charges and disproportionate distribution charges for local generation. Small-scale and community-owned renewables will be provided with fixed price feed-in tariffs for installations of up to 50MW to ensure their output can be sold for a fair price.

Community groups, cooperatives and local authorities would be supported by the Green Investment Bank to purchase renewable power plant and contribute to local energy supply at competitive rates.

Develop low carbon transport

Policy

EN510 A Green government will reduce the energy demand from transport; we will work with rail and bus fleet operators, transport authorities and the automotive industry to target improvements in the energy efficiency of trains, coaches and vehicles. We will work with the automotive industry to target overall improvement in vehicle energy efficiency of one third on 2012 levels by 2030, and use regulations and taxes to promote substantial reductions in weight, size and power of vehicles.

EN511 Energy and transport policy will be linked at national and local level to reduce the demand for travel and will promote full integration of bus, coach and rail services to improve the potential for personal/public transport interchange. We will work with rail operators to increase the transfer of freight to rail and with both bus and rail operators to increase passenger use.

EN512 We will work with the domestic aviation and shipping industry to improve fleet efficiencies

and to reduce GHG emissions and explore options for shifting to alternative fuels.

EN513 Multilateral agreements with relevant countries and organisations will be sought in order to reduce energy use and GHG emission of international air transport and shipping.

EN520 We will ensure the shift of transport power sources to mainly renewable electricity.

EN521 Full electrification of the rail network and bus fleet by 2030 will be targeted.

EN522 We will incentivise a shift from most motorised road transport to buses, rail and cycling. We will focus on changing road transport (mainly personal transport and vans) to electricity in order to remove reliance on petroleum for transport and achieve significant reductions in GHG emissions, major improvement in urban pollution levels (with substantial quantifiable health benefits) as well as safety for other road users. We will support rapid development of electric transport technologies including batteries and charging infrastructure, and will collaborate with the logistics industry to develop options for HGVs (24% of road transport energy) including alternative fuels, electric and hybrid vehicles.

EN523 We will aim for a 30% shift to electricity by 2030 and 90-100% by 2050 for cars and vans; the target for HGVs will be 20% electric by 2030 and 90-100% by 2050.

Support research, development and demonstration

Policy

EN610 The Green Party will support RD&D in demand reduction and efficiency techniques and materials. Funding will be provided for energy efficiency technologies in all sectors to rapidly drive up the pace of innovation and performance, and to reduce energy intensity of materials, industrial processes and products. Support will be targeted at:

- a) building fabric and performance efficiency in all sectors including design, procurement, construction and operation processes, innovative materials and components;
- b) process and product efficiencies in industry;
- c) behaviour of energy users and performance-in-practice of efficiency techniques.

EN611 We will support research into methods of financing energy efficiency and renewables including the accurate pricing-in of co-benefits such as pollution reduction and other strategic effects.

EN620 We will support RD&D in renewable energy production: funding will be provided to support research, development and cost reduction for renewable and low carbon power generation technologies. Priority technologies for research and development will be:

- a) tidal stream and wave power;
- b) large and small scale photovoltaic and solar thermal installation;
- c) biogas generation and associated logistic infrastructure.

EN630 A Green government will support RD&D in energy storage and demand balancing technologies.

EN631 We will accelerate the development of 'smart grid' technology, demand management and load shifting technologies, as well as heat and electricity storage technologies to enable de-centralised energy systems. We will support R&D for:

- a) dynamic demand appliance technologies;
- b) hydrogen production as energy carrier and store using surplus renewable electricity;
- c) fuel cells, compressed and liquefied gas storage, flywheels, super magnetic energy storage and lithium iron batteries.

Ensure the skills needed for the transformation are in place

Policy

EN710 The Green Party will ensure rapid development of skills required for demand reduction and energy efficiency and will expand, in cooperation with the vocational, education and training sector, a major programme to develop the skilled workforce capable of supporting the pace of programmes required to meet demand reduction and energy efficiency targets, and to design, construct and operate buildings and processes which meet stringent efficiency standards. We will also ensure provision of training for expert assessment and monitoring of performance and compliance across the energy spectrum.

EN711 We will support continuing professional development programmes to ensure trainers are

adequately qualified and experienced, and will ensure that energy efficiency modules within college and apprenticeship frameworks are mandatory.

EN712 Training programmes will be jointly funded with industry to develop the skill base needed in energy management, assessment and monitoring, as well as in energy-related construction, manufacturing and design professions.

EN720 We will ensure the skilled workforce needed for the change to low carbon energy is provided through the rapid expansion of training, 'upskilling' and skills transfer programmes aimed at creating the substantial work force needed to support the change to renewable energy generation, supply and distribution.

EN721 We will work with the existing energy industries to maximise benefits of transferring skills and expertise, making best use of existing skilled and expert personnel, as the energy landscape changes.

Make sure regulation and monitoring of the energy system is fit for purpose

Policy

EN810 Ensure UK legislation provides for right of grid access for renewable energy installations at all times, and that grid balancing becomes an enabler for priority access of renewables. A Green government will ensure regulations require improving standards for demand reduction and will establish an independent regulatory body with appropriate powers to oversee the implementation of demand reduction and efficiency measures in the interests of consumers.

EN811 We will ensure that building regulations, as well as other energy efficiency standards and sustainability accreditation systems, are fit for purpose and consistent with national policies and local authority energy plans. Mandatory standards and accreditation schemes will be based on measured building performance.

EN812 Demand reduction and efficiency regulations and standards will be applied to existing buildings, including listed buildings and conservation areas, as well as new buildings; landlords will be required to ensure that the energy performance of their buildings is improved at their own expense in line with a phased programme of increasing efficiency standards.

EN813 Companies will be required to disclose their energy use and associated carbon emissions in total, against appropriate benchmarking data, to enable performance comparison by sector.

EN814 Institutional investors will be required to disclose risks due to investments in companies dependent upon unburnable fossil fuel reserves, and we will work with investors to investigate alternative investments in energy efficiency and renewable energy.

EN815 We will regulate energy efficiency standards in electrical appliances and equipment in order to progressively reduce energy use and promote the development of smart controls for monitoring and managing energy use according to people's preferences.

EN816 We will introduce regulations requiring the embodied carbon (carbon footprint) of materials, goods and service to be clearly identified and taken into account in procurement arrangements and contract procedures.

EN820 We will improve regulation of energy supply and will review all existing energy-related policy, retiring policies that have not proved effective at reducing demand and carbon emissions or at driving increased renewable capacity. We will ensure wherever possible that policies do not overlap; simplifying the policy landscape will reduce the cost of regulatory compliance.

EN821 We will urgently review the effectiveness of energy-related regulatory bodies such as Ofgem to ensure they have the appropriate powers and resources to carry out their functions in relation to the rapidly evolving energy supply and distribution system envisaged in this policy; and in relation to policies involving environmental objectives and protection of consumers' interests, including the eradication of fuel poverty (see [EN123](#)).

EN823 We will establish the legislation and regulations necessary for the restructuring of the energy supply industry, to enable the separation of generators from suppliers, and to support and regulate local ownership of energy supply and distribution.

EN824 Generation plant that is currently incentivised to produce diverse and low carbon electricity through price incentives like the Renewable Obligation and successor schemes will be required to

disclose to the regulator how much they invest in UK assets. By regulating prices for generation, transmission and distribution, the regulator will ensure that disproportionate financial gains are not accrued by any market actors. We will require greater transparency in accounting and disclosure of spending by renewable energy generators to ensure that companies do not take advantage of energy consumers by colluding to keep prices artificially high.

EN830 To ensure effective monitoring of compliance we will set clear trajectories for tightening regulations over time. We will regularly review the effectiveness of regulation, and support research needed for this purpose.

EN831 We will provide the resources for effective monitoring of compliance with regulations at both local and national level.

Provide the means for financing the energy transformation

Policy

EN910 In order to stimulate demand reduction and efficiency, a Green government will need to devote a considerable outlay to an energy efficiency fund, to be used in particular:

- a) for homes, community organisations and small businesses to ensure energy bills are brought under control;
- b) to ensure homes can be kept warm affordably;
- c) to provide grants to improve the energy efficiency of fuel poor households;
- d) to subsidise where needed the interest rates paid on energy efficiency loans for owners of buildings;
- e) to support heat network development;
- f) to help industry change to a low carbon economy.

The cost of this will initially be met from general taxation. In the longer term, as revenues from carbon quotas (see [CC290](#)), the carbon floor price and other energy taxes rise, consideration will be given to dedicating them to the energy efficiency fund and its purposes.

EN911 The existing level of "carbon tax" paid on fossil fuels used in electricity production will be extended to all fossil fuels and to methane emissions from extracting gas and coal. Therefore all fossil fuel use and extraction in the UK will be exposed to carbon quotas (see [CC290](#)) and taxes that will increase at a pre-determined trajectory. These carbon taxes will supplement the discredited EU-Emissions Trading Scheme (EU-ETS) that has been so ineffective at reducing emissions and discouraging high-carbon power generation. Rather than relying on the EU-ETS, the design and operation of which have proved susceptible to lobbying and manipulation by energy-intensive firms and nations, we will expand the carbon floor price to apply to all greenhouse gases emitted in the UK.

EN912 We will establish frameworks for funding demand reduction and energy efficiency measures through feed-in tariff payments for efficiency schemes based on measured energy savings, VAT reductions on demand reduction work, council tax/business rate rebates and other tax breaks, and grants for approved works.

EN913 We will provide energy efficiency loans; the interest rate on loans will be subsidised by the Green Investment Bank to be less than the rate of inflation. The more ambitious the project in terms of percentage of energy saved, the greater the level of interest rate subsidy that will be provided. Reliable and objective assessments will be conducted to measure energy savings. There will be discounts available to help finance higher cost measures.

EN914 We will underwrite 'green bonds' via the Green Investment Bank to fund investment in deployment of energy efficiency and renewable energy technology, with tax breaks provided to retail and institutional investors for purchasing green bonds.

EN915 We will require the public sector and encourage other sectors to use their substantial combined spending power to incentivise efficient technology development, improve construction standards and reduce the carbon (and energy) footprint of goods, services, vehicles and buildings purchased. We will restrict the public sector to purchasing from only the top quartile of available options by energy efficiency.

EN920 Measures for funding the change to renewable energy will be established.

EN921 We will immediately consult with industry and other experts to ensure that Electricity Market Reform (EMR) measures and other policies in the 2013 Energy Act facilitate rather than impede maximum deployment of renewables and energy efficiency technologies.

EN922 We will introduce auctions for wind contracts as soon as possible, with auctions designed to ensure a minimum amount of offshore wind is contracted, in line with technology development, and will consult on and introduce a green power auction market (GPAM) that will deliver a stable price to independent generators, provide them with a reliable route to market and significantly reduce the cost of energy to citizens. The GPAM will be designed to meet the needs of small generators for whom the contract for difference arrangements will likely prove too complex and/or commercially unviable.

EN923 We will extend the cap on small-scale feed-in tariffs to 50MW.

EN924 Following consultation, we will replace complex contract-for-difference arrangements with feed-in tariffs that will decline with the decreasing cost of each energy generation and energy efficiency technology, with rates set at regular intervals and announced as far in advance as possible.

EN925 We will replace flawed capacity market proposals likely to be high-cost and open to manipulation with an extension to the short term operating reserve and funding for establishing required levels of interconnection.

EN926 We will review capital market conditions and set out options to support mobilisation of new sources of finance, such as from banks and institutional investors. This will include possible roles for Infrastructure UK and the Green Investment Bank.

EN927 In accordance with the UK's international G20 commitments, we will phase out socially and environmentally-destructive subsidies and tax breaks for fossil fuel extraction and production, using international best practice to maximise the chance of success, including:

- a) an independent and transparent assessment of the full extent, function and impacts of fossil fuel subsidies and the processes and players involved in their creation and operation;
- b) analysis of possible adverse impacts of reform and likely stakeholder response;
- c) early stakeholder consultation to ensure needs and concerns are understood and to enable design of appropriate mitigating measures where necessary;
- d) targeted support for vulnerable groups with sun-setting clauses to ensure that the fiscal burden of fossil fuel subsidies is not replaced by that of entrenched mitigating policies;
- e) phased removal to enable recipients to adjust and for mitigating measures to be implemented without allowing vested interests to delay reforms;
- f) use of independent organisations and automatic and transparent mechanisms to set fossil fuel prices post-reform.

Money saved from eliminating regressive fossil fuel subsidies will be used to support energy efficiency measures as well as the diversification and restructuring of the energy generation and supply networks and the elimination of fuel poverty.

Strengthen International energy policy

Policy

EN1001 A Green government will work with relevant international agencies to reduce global greenhouse gas emissions. We will work with EU partners to improve and tighten EU regulations on energy efficiency and carbon reduction; this will include seeking to improve the current EU Emissions Trading Scheme and development of measures to reduce the embodied carbon of goods traded within the EU.

EN1002 We will seek multilateral agreements to limit the impact of international air traffic and shipping on GHG emissions, and to improve the energy efficiency of shipping.

EN1003 We will work at EU and international level to halt the exploitation of 'extreme fossil fuels', including polar and deep sea exploitation as well as extraction of oil and gas from tar sands and shale.

EN1004 We will strongly support UN and other international efforts to curb GHG emissions in the context of climate change negotiations and through cooperation on environmentally responsible energy policy.

EN1005 The Green Party will support and encourage the transfer and exchange of energy efficiency, renewable energy generation distribution and storage technology and expertise between nations

EN1006 We will seek to rapidly advance international coordinated research, development and deployment for techniques for carbon capture and storage.