



The Renewable Energy Strategy

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A draft EU Directive on Renewable Energy sets an overall target of 20% of energy to come from renewable energy sources in the EU by 2020. Each Member State has been allocated an individual target under it based on recent renewable energy production. In 2006 1.5% of the UK's energy was produced from renewable sources. The UK's provisional target is for 15% of energy to come from renewable sources by 2020. Against what the Government calls a "very challenging" target, the Government published a Consultation on a Renewable Energy Strategy in June 2008, which examines how the UK could meet this target. A final Renewable Energy Strategy is expected in Spring 2009. This note sets out to explain some of the key proposals in this consultation and details some of the reaction to it.

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1 Background and context

The Department for Business, Enterprise and Regulatory Reform (BERR) website states that renewable energy is “an integral part of the Government's longer-term aim of reducing CO₂ emissions by 60% by 2050”.¹ Under the *Climate Change Bill 2007-08* currently passing through Parliament, this target would become statutory, with an interim target for 2020 as well as the introduction of five-year carbon budgets.²

The European Commission *Strategic European Energy Review* was published on 10 January 2007. As part of the Review, the *Renewable Energy Road Map* set out a long term vision for renewable energy sources in the EU.³ It proposed that the EU establish a binding target of 20% for renewable energy's share of energy consumption in the EU by 2020. It also proposed a binding 10% target for the share of renewable energy in transport petrol and diesel. The Brussels European Council of March 2007 reaffirmed this proposal and invited the Commission to submit proposals for a new Directive on the use of renewable resources.⁴ It stated that this should include legally binding targets for the overall share of renewable energy and the share of biofuels for transport in each Member State.⁵ This proposed Directive was published on 23 January 2008, although due to sustainability issues the biofuel proposals are under question.

Currently, 8.5% of the EU's total energy consumption is generated from renewable sources. This means that across the EU an average increase of 11.5% is needed to meet the 20% target by 2020. It is proposed that each Member State will have its own legally enforceable target which will contribute towards the 20% target.⁶ The UK's proposed (but not yet agreed) target is for 15% of total energy consumption to come from renewable sources by 2020.⁷ Press reports indicate that it is hoped that agreement will be reached by the end of the French Presidency at the end of the year,⁸ with a target date for the adoption of the legislation in the first half of 2009.⁹ An article in the *Guardian* from 16 October, [The EU has 10 weeks to broker a deal on climate change](#), sets out some of the problems with reaching agreement at EU level. Some EU countries appear to be concerned about the effect

¹ Department for Business, Enterprise and Regulatory Reform (BERR) website, [Renewable Energy](#) [on 26 June 2008]

² Bill 97 2007-08

³ COM(2006) 848

⁴ Council Document 7224/07

⁵ Brussels, [Proposal for a Directive Of The European Parliament And Of The Council on the promotion of the use of energy from renewable sources](#), 23 January 2008, COM(2008) 19 final

⁶ EC press release IP/08/80, [Boosting growth and jobs by meeting our climate change commitments](#), 23 January 2008

⁷ Brussels, [Proposal for a Directive Of The European Parliament And Of The Council on the promotion of the use of energy from renewable sources](#), 23 January 2008, COM(2008) 19 final, p41

⁸ “The EU has 10 weeks to broker a deal on climate change” [The Guardian](#), 16 October 2008

⁹ Euractiv website, [EU renewable energy policy](#) [on 19 November 2008]

of the targets on business in the wake of the credit crunch. The official UK position however appears to be in favour of keeping the target as proposed. Similarly an article from 17 October in the *Times*, [EU climate change push in disarray as Italy joins Iron Curtain revolt](#), sets out some of the EU politics surrounding the target.

In the UK in 2005 1.3% of energy consumption came from renewable sources and in 2006 it was 1.5%.¹⁰ A table of all national targets was set out in the proposed Directive:¹¹

A. National overall targets

	Share of energy from renewable sources in final consumption of energy, 2005 (S ₂₀₀₅)	Target for share of energy from renewable sources in final consumption of energy, 2020 (S ₂₀₂₀)
Belgium	2.2%	13%
Bulgaria	9.4%	16%
The Czech Republic	6.1%	13%
Denmark	17.0%	30%
Germany	5.8%	18%
Estonia	18.0%	25%
Ireland	3.1%	16%
Greece	6.9%	18%
Spain	8.7%	20%
France	10.3%	23%
Italy	5.2%	17%
Cyprus	2.9%	13%
Latvia	34.9%	42%
Lithuania	15.0%	23%
Luxembourg	0.9%	11%
Hungary	4.3%	13%
Malta	0.0%	10%
The Netherlands	2.4%	14%
Austria	23.3%	34%
Poland	7.2%	15%
Portugal	20.5%	31%
Romania	17.8%	24%
Slovenia	16.0%	25%
The Slovak Republic	6.7%	14%
Finland	28.5%	38%
Sweden	39.8%	49%
United Kingdom	1.3%	15%

The Government states that the UK's 15% target is an increase of 1000% on current levels,¹² and has called it "a very challenging target",¹³ which "should not be underestimated".¹⁴ In the 2007 Energy White Paper the Government set out measures to meet its own target which was designed to triple the use of renewables to 5% of overall energy in 2020.¹⁵ Prior to the EU proposing a target for the proportion of energy to come from renewables, the UK Government already had its own target of 20% of UK electricity to be generated from renewables by 2020. The EU target is a far higher commitment than the UK one because it comprises all forms of energy, not only electricity. It is thought that the EU target will require the UK to generate up to about 35% of its electricity from renewables by 2020.

In recognition that more needed to be done to reach the EU targets the Government published a Consultation on the UK Renewable Energy Strategy (RES) on 26 June 2008.¹⁶ The Consultation builds on existing measures and outlines possible measures to "facilitate a rapid expansion of renewables".¹⁷ A written ministerial statement announcing the launch of

¹⁰ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p5

¹¹ Brussels, [Proposal for a Directive Of The European Parliament And Of The Council on the promotion of the use of energy from renewable sources](#), 23 January 2008, COM(2008) 19 final, p41

¹² BERR press release, [Tenfold renewables increase to propel UK toward low carbon future](#), 26 June 2006

¹³ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p5

¹⁴ HC Deb 26 June 2008 c27WS

¹⁵ HC Deb 26 June 2008 c27WS

¹⁶ BERR, [UK Renewable Energy Strategy](#), 26 June 2008

¹⁷ HC Deb 26 June 2008 c27WS

the RES states that the consultation will last for three months and will inform the final UK Renewable Energy Strategy to be published in spring 2009, “once the final EU Directive implementing the target for EU renewable energy has been agreed and the UK share decided.”¹⁸

In addition to the RES, the Renewables Advisory Board (RAB), an independent, non-departmental public body sponsored by BERR, has also published a “vision” for *how the UK can meet its target of 15% renewable energy*, in June 2008.¹⁹ The vision examines what could be delivered by 2020 with “significant but achievable policy changes”. The RAB estimated that a “business as usual” case would deliver about 6% of energy from renewables by 2020; that a target of 15% is achievable, but only within a “rapid development of a transformed energy framework with radically new economic, political and social drivers.”²⁰

For further information about EU energy policy see Library Standard note, [EU Energy Policy](#), SN/SC/4602, 24 June 2008. Statistical information about renewable energy is also available in Library Standard note, [Renewable Energy Statistics](#), SN/SG/32179, April 2008. Further Library information about domestic energy policy is available on the Library “[Energy](#)” subject page on the Parliamentary intranet.

After the publication of the *Renewable Energy Strategy* in June 2008, BERR published the *Digest of United Kingdom energy statistics 2008* in July 2008 which gives updated figures about UK energy production.²¹ This note uses the figures as set out in the Renewable Energy Strategy.

2 What is proposed?

John Hutton, the Secretary of State for Business, Enterprise and Regulatory Reform summarised the main proposals in the RES in a written ministerial statement:

- Extending and raising the level of the Renewables Obligation to encourage up to 30-35% of our electricity to come from renewable sources by 2020;
- Introducing a new financial incentive mechanism to encourage a very large increase in renewable heat, including in homes and buildings;
- Delivering more effective financial support for heat and electricity microgeneration technologies in homes and buildings;
- Helping the planning system to deliver, by agreeing a clear deployment strategy at regional level similar to the approach established for housing;
- Ensuring appropriate incentives for new electricity grid infrastructure and removing grid access as a barrier to renewable deployment;
- Exploiting the full potential of energy from waste, by considering further restrictions on landfilling biomass, as far as is practical;
- Requiring all biofuels to meet strict sustainability criteria, to limit adverse impacts on food prices, or other social and environmental concerns;

¹⁸ HC Deb 26 June 2008 c27WS

¹⁹ RAB, [2020 Vision: How the UK can meet its target of 15% renewable energy](#), 18 June 2008

²⁰ RAB, [2020 Vision: How the UK can meet its target of 15% renewable energy](#), 18 June 2008, p9

²¹ BERR, [Digest of United Kingdom energy statistics 2008](#), URN No: 08/87, 31 July 2008

- Encouraging the development of new renewable technologies, by ensuring effective support particularly where the UK has the potential to be a market leader;
- Maximising the benefits for UK business, by providing a clear long-term policy framework, working with Regional Development Agencies to tackle key blockages, considering support for specific technologies and addressing skills shortages.²²

A PQ from 22 July 2008 shows that Government is working with all the Devolved Administrations in developing the strategy, but has not yet reached a view on the proportion of the 2020 target that will be met from Northern Ireland, Scotland and Wales.²³

2.1 Electricity

The headline figure in the RES is that up to 30-35% of UK electricity may need to come from renewable sources.²⁴ In 2006 the renewables generated 4.5% of electricity. To help meet the 2020 target, this means that approximately 35-40 GW of renewable electricity will be needed, compared to the 5GW that the UK has today.²⁵ Currently, there are five main types of renewable electricity generation: biomass, wind (onshore and offshore), hydro, wave and tidal and solar. The report states that it expects the key growth area to meet the target in the electricity sector to be from onshore and offshore wind power.²⁶

Wind power

The suggestion in the RES is that to meet the 2020 target, a total of 14GW of capacity may need to come from onshore wind farms. The UK currently has 165 operating onshore wind farms with a combined generating capacity of 2GW. The RES calculates that combining onshore wind farms currently under construction, those already with planning and related consents and those held at the planning stage, there would be an additional 366 farms delivering a further 10GW of capacity. It concludes therefore that meeting the 14GW capacity of onshore wind farms would be “particularly challenging”. The Renewables Advisory Board estimates that approximately 13GW of power from this source could be deployed by 2020.²⁷

In regard to offshore wind farms, the RES states that in 2008 the UK will overtake Denmark as the country with the largest offshore wind deployment in the world.²⁸ This was announced as being achieved on 21 October 2008 with 597MW fully constructed.²⁹ The generating capacity from offshore wind is currently less than 1GW. Another 8GW of capacity is already planned.³⁰ The BERR modelling suggests that up to 14GW of offshore wind power may be achievable by 2020, which would equate to 3000 extra 5MW turbines.³¹ The RAB suggest a figure of 18GW could be achieved by 2020.³² If achieved, this should be enough to meet the approximate 13GW of offshore wind capacity proposed for meeting the 2020 targets.

Some of the current obstacles to the development of offshore wind power are detailed in the RES. These include: the length of time it takes to get planning consent for a wind farm;

²² HC Deb 26 June 2008 c27WS

²³ HC Deb 22 July 2008 c1142W

²⁴ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p11

²⁵ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p53

²⁶ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p53

²⁷ RAB, [2020 Vision: How the UK can meet its target of 15% renewable energy](#), 18 June 2008, p4

²⁸ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p55

²⁹ Department of Energy and Climate Change, [UK is world leader in offshore wind](#), 21 October 2008

³⁰ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p11

³¹ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p57

³² RAB, [2020 Vision: How the UK can meet its target of 15% renewable energy](#), 18 June 2008, p4

compliance with the EU Birds and Habitats Directives; implications for radar systems; and accommodating an increase in the numbers of turbines with a growth in shipping and the development of new ports.³³ The Government has recognised some of the issues with the planning regime for wind farm developments and has introduced measures in the current *Planning Bill 2007-08* going through Parliament and the *Draft Marine Bill* to address concerns. One proposed measure is to ensure that all onshore wind developments above 50 MW and offshore wind developments above 100 MW in England and Wales are considered by a new Infrastructure Planning Commission on “tight timeframes.”³⁴

For more information about planning and wind farms, see Library standard note, [Consents for Wind Farms](#), SN/SC/4370, 13 June 2008.

During an exchange in the House of Lords on 17 November, Lord Broers questioned the practicality of installing enough offshore wind generators:

Lord Broers: My Lords, Shell and BP are engineering companies. The fact that they have pulled out may mean that they know something, maybe that offshore wind is the most expensive and impractical of all the large-scale renewable energy possibilities. The new commitment we have made of 25 gigawatts by 2020^[35] means, in effect, installing 10 huge generators every day. There are only 60 days in the North Sea when the weather makes that possible, and we have only one barge that can put up these wind generators. Would it not be better if the Government looked to some other renewable sources of energy and ceased to place so much emphasis on offshore wind?

Lord Hunt of Kings Heath: My Lords, of course the Government do not see offshore wind as the sole provider of renewable energy. We provide support and encouragement in many different sectors of renewables. However, we should not ignore the potential capacity that offshore wind can provide. The third competitive round of bids for development rights to build offshore is under way. I understand the question of barges, and the Government are working with industry on that, but we have just overtaken Denmark as the world leader in offshore; surely it is good to invest in that area.³⁶

A report by the House of Lords Select Committee on Economic Affairs, published on 25 November 2008, [The Economics of Renewable Energy](#), raised concern about the intermittency and reliability of wind power, and suggests that more “reliable” means of generation should be focussed to meet the target:

We have a particular concern over the prospective role of wind generated and other intermittent sources of electricity in the UK, in the absence of a break-through in electricity storage technology or the integration of the UK grid with that of continental Europe. Wind generation offers the most readily available short-term enhancement in renewable electricity and its base cost is relatively cheap. Yet the evidence presented to us implies that the *full* costs of wind generation (allowing for intermittency, back-up conventional plant and grid connection), although declining over time, remain significantly higher than those of conventional or nuclear generation (even before

³³ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p57

³⁴ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p13

³⁵ This appears to relate to the Government commitment to publish for consultation a Strategic Environmental Assessment of its plan to further expand offshore wind in the UK by up to 25GW, with a decision due in Spring 2009 on the acceptable level of development. See Department for Energy and Climate Change press notice [UK is world leader in offshore wind](#), 21 October 2008.

³⁶ HL Deb [17 November 2008 c924](#)

allowing for support costs and the environmental impacts of wind farms). Furthermore, the evidence suggests that the capacity credit of wind power (its probable power output at the time of need) is very low; so it cannot be relied upon to meet peak demand. Thus wind generation needs to be viewed largely as additional capacity to that which will need to be provided, in any event, by more reliable means.

[...]So far as reliability is concerned, the best options among renewable sources of generation are tidal barrage and biomass, which are problematic for other reasons, and hydro-power, which is not, but is already near the limit of its potential in the UK.³⁷

Biomass, Hydro, Wave and Tidal Power

Although the main area of growth for renewable electricity is expected to come from wind power, the RES also considers the contribution that biomass, hydro, wave and tidal power may be able to make. For biomass, the most likely source of potential growth is generation from waste or energy crops rather than landfill (currently the most significant source of biomass based generation in the UK), which is already fully exploited. For hydro power the RES states that the untapped resource for further hydro generation is from micro and small scale schemes.³⁸

The current level of generation from wave and tidal power is detailed in the RES as “negligible”. The main opportunities for developing tidal power further will be dependant on the outcome of the Government’s Severn Tidal Power Feasibility Study which is a two year study that began in January 2008.³⁹ The study is to enable the Government to decide whether and on what terms a tidal range power scheme in the Severn Estuary could be supported. Two particular sites are being considered. One of them, the “Cardiff-Weston Barrage” is unlikely to be operation before 2022, but could be allowed to count towards the 2020 target provided that it meets specific qualifying criteria (including at least 5GW capacity under construction by 2016). It is estimated that it could have a generation capacity of 8,640MW – around 5% of annual UK electricity demand. The other option, the “Shoots Barrage” is estimated to have an installed capacity of 1050MW and take four years to construct.⁴⁰

Renewables Obligation and feed-in tariffs

In England and Wales, the current financial incentive to produce renewable electricity comes from the Renewables Obligation (RO). The RO was introduced in 2002 to “stimulate growth of electricity generation from renewable sources.”⁴¹ In Great Britain the RO operates under the *Electricity Act 1989* with separate orders in England, Wales, Scotland and Northern Ireland. Under the system licensed electricity suppliers have an obligation to produce evidence that a certain amount, or quota, of the electricity supplied to customers has been generated using renewable sources. The evidence is a Renewables Obligation Certificate (ROC). One of the measures in the current Energy Bill is for the RO to be banded to provide different levels of support for different renewable technologies – also called “differentiated support”. Banding will reflect the cost and stage of development of each technology.

Since the RO was introduced, eligible renewable energy generation sources in the UK have increased from less than 2% of all generation sources in 2001, to around 4.4% in 2006. The

³⁷ House of Lords Select Committee on Economic Affairs, [The Economics of Renewable Energy](#), 4th report of session 2007-08, HL Paper 195-I, 25 November 2008, paras 230-231

³⁸ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p57-58

³⁹ BERR website, [Tidal Power: Severn Estuary](#) [on 10 September 2008]

⁴⁰ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p58-59

⁴¹ Bill 53-EN 2007-08, p26

RES estimates that with measures set out in the Energy Bill, the RO could lead to around 14% of electricity being generated from renewable sources by 2015-20. The RES explains however that 14% is not enough to meet the EU 2020 target, with the figure needing to “at least double.”⁴²

The Government admits that the RO was not envisaged initially to be used for a target of this scale or of this urgency. The RES questions therefore whether the RO is still the right support scheme, bearing in mind financial commitments already made by renewables operators on the basis of the RO, or whether alternative support mechanisms, such as feed-in tariffs, may be more appropriate.

A feed-in tariff is where renewable generators receive fixed payments per unit of electricity. The price is normally higher for electricity from renewable generators than for electricity generated from other sources. At the Commons committee stage of the *Energy Bill 2007-08* both the Conservatives and the Liberal Democrats proposed new clauses, which were not subsequently agreed-to, which would have enabled regulations to be made for a feed-in tariff system.⁴³ Some of the main arguments were that a feed-in tariff system would be a simpler system and would be more suitable than the RO to stimulate microgeneration by households.⁴⁴ The RES also considers the merits of feed-in tariffs for large-scale generation but concludes that feed-in tariffs were not likely to be any more effective at delivering the 2020 target, particularly given some of the changes being made by the *Energy Bill 2007-08* to strengthen the RO. It states that the disruption for operators of changing over to this system could actually jeopardise the chance of meeting the target.⁴⁵

The RES does acknowledge however, that the RO will “need modifying” if it is to continue as the principal support mechanism. The two main areas identified for change are whether to extend the end date of the RO to encourage long-term support and whether to increase or remove the current cap of 20% in order to incentivise increased renewable generation. The RES announces that assuming the RO is maintained, that there will be further consultation on changes to the RO prior to the publication of the Renewable Energy Strategy in Spring 2009.⁴⁶

On the subject of feed-in tariffs, the RES goes on to analyse incentives for microgeneration. This is one type of “distributed energy” which is the local supply of electricity and heat generated on or near the site where it is used. Examples of this are solar photovoltaics – panels that generate electricity from daylight and ground-source heat pumps which use warmth in the ground to provide space heating. The RES considers what more can be done to give financial support to renewable electricity generation on this scale. It recognises that there is a “hassle factor” for household generators in accessing the ROC system in that they need to register, find a buyer for their ROCs and negotiate a price with them, which may in itself be a source of uncertainty. The RES concludes that “there may be a good theoretical case for the introduction of feed-in tariffs for microgeneration.”⁴⁷

An annex to the RES sets out how a feed-in tariff for microgeneration might work. It stresses that certainty in the ROC system for large scale generation would be maintained and that

⁴² BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p89

⁴³ PCB 26 February 2008 c292-315

⁴⁴ House of Commons Library Research Paper 08/40 Energy Bill: Committee Stage Report, 23 April 2008, p29

⁴⁵ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p95

⁴⁶ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p97

⁴⁷ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p151

installations would not be able to receive double incentives – i.e. would not be able to claim ROCs and use a feed-in tariff. It does not give any projections about how increased microgeneration or distributed energy would help to meet the 2020 target.

In a press notice on 16 October 2008, Ed Miliband, Secretary of State for the newly created Department of Energy and Climate Change, said that he recognised the potential of feed-in tariffs to play an important role in renewable energy delivery at the level of small-scale generation. He said that the Government would bring an amendment to the current *Energy Bill* to make this happen.⁴⁸

Other electricity generation issues

The RES explains that a “key enabler” for achieving the 2020 target is improving grid connections to the electricity network for renewables and states that “securing a grid connection on suitable terms remains a major barrier to the deployment of new renewable generation.”⁴⁹ The Great Britain electricity transmission system has “very limited potential to accommodate new generation without further system reinforcement”.⁵⁰ There are consequently a “significant” number of renewables projects held in what has become known as the “GB queue”. The RES estimates that there are 10 GW worth of projects waiting to connect to the system in Scotland alone, with some developers offered dates approaching 2020 as the earliest connection date possible to the network.

The Government commissioned a Transmission Access Review (TAR) in 2007 to examine barriers to timely connection to the grid. The report of the review was published alongside the RES.⁵¹ The TAR concluded that if we are to meet the 2020 target that “fundamental” changes will need to be made to the codes that govern access to the grid. It reported that these changes should be possible within the existing industry governance process as set down by Ofgem, but that if progress is “insufficient” at the end of 2008, that it will consider further options including legislation. The TAR also suggested that urgent steps should be taken to connect new generation more quickly, particularly for projects which already have planning permission through a form of “connect and manage” for an interim period. This is explained as National Grid connecting a generator to the grid as soon as a connection can be physically made without the need for wider transmission reinforcements. The RES estimates that the measures in the TAR could bring forward 1GW of renewable energy connections.⁵²

An article in the *Guardian* on 24 July 2008 reported that the Government had asked for an amendment to the draft EU Renewable Energy Directive to change the wording “Member states *shall* also provide for priority access to the grid system of electricity produced from renewable energy sources”, to Member states *may* also provide...⁵³ In the article Britain is allegedly accused by a European official as being obstructive about renewable energy in order to protect the interests of more traditional sources of energy such as coal, gas and nuclear. The reason for the amendment and the BERR response is also given:

⁴⁸ Department of Energy and Climate Change, [UK leads world with commitment to cut emissions by 80% by 2050](#), 16 October 2008

⁴⁹ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p77

⁵⁰ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p78

⁵¹ Ofgem/ BERR, [Transmission Access Review Final Report](#), 26 June 2008

⁵² BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p81

⁵³ “Britain tries to block green energy laws”, [The Guardian](#), 24 July 2008

Britain's justification for the change, included in the document, was that it was concerned about relying too heavily on intermittent renewable sources of electricity. It said: "The use of 'shall' could have substantial implications on network balancing and security of energy supply." It said "thermal sources" of electricity were needed as back-up, and "over time this essential back-up generation might not be available if new renewable generation projects must be given access to the grid". It said the UK wanted the "discretion to prioritise renewable generation".

[...]A spokesman for the DBERR said: "Priority access for renewables is not necessary for us to meet our fair share of the EU renewables target. What renewable generators want is quicker access to the grid, not priority access. The UK is already taking significant steps to remove grid access barriers for renewables."⁵⁴

2.2 Heat

The RES details that heat, in all its forms accounts for 49% of the UK's final energy demand and 47% of carbon emissions. It states that at present only about 0.6% of heat is generated from renewable sources, the majority of it from wood combustion in the domestic and industrial sectors.⁵⁵ It also explains that the heat market is more complex and decentralised than the market for electricity: that heat is not bought and sold on the National Grid like electricity; and that heat cannot easily be transported for long distances without significant losses. Consequently consumers generally buy heating fuel (principally gas) or electricity and then convert these to heat on site in boilers or electric heaters.

The RES states that "in order to meet the EU 2020 renewable energy target we will require significant levels of renewable heat, and ambitious policies to deliver them." Indeed, it goes on to estimate that 14% of heat may need to be generated from renewable sources to meet the EU 2020 target.⁵⁶ The Office of Climate Change Heat Project concluded in January 2008 that 6% of UK heat could be met from renewable sources by 2020.⁵⁷ This, according to the RES was based on a moderate level of financial support, mainly through encouraging switching by industrial, commercial, and residential customers located off the gas grid from oil, coal or electrical heating, to biomass or other renewable technologies. It therefore concludes that achieving a level of 14% of heat from renewable sources would "depend upon removing constraints and putting in place sufficient financial support."⁵⁸

In the UK biomass-based technologies have one of the greatest potentials for increasing renewable heat generation. According to BERR, biomass heat is a proven technology and is one of the most cost effective potential sources of renewable heat. Biomass heat comes from the burning of organic matter, such as wood. Some types of biomass can be used to produce biogas through the process of anaerobic digestion; this can then be used to directly generate heat or electricity on site. Biogas can be upgraded or "reformed" to make biomethane which could then be injected into the gas grid – some EU Member States already do this.⁵⁹ The RES suggests biomass could contribute approximately half of the renewable heat energy needed for the 2020 target with biogas contributing around a quarter.⁶⁰

⁵⁴ "Britain tries to block green energy laws", [The Guardian](#), 24 July 2008

⁵⁵ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p102

⁵⁶ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p102 and 103

⁵⁷ Department for Business, Enterprise and Regulatory Reform, *Heat Call for Evidence*, January 2008, para 88

⁵⁸ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p103

⁵⁹ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p108

⁶⁰ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p112

Another contributor to the target would be microgeneration technologies, such as solar water heating and ground and air source heat pumps. The RES suggests microgeneration would need to play a “significant” role towards meeting the 2020 target – indicating that it would need to provide a quarter or more of the total of renewable heat. It recognises that this would require a “rapid expansion in the installation rate” of such technologies, with an increase of 40% per year in the case of solar thermal.⁶¹

The RES proposes several measures to increase renewable heat generation in the UK. These are:

- introducing a new heat incentive mechanism, such as a Renewable Heat Obligation or a Renewable Heat Incentive, akin to a feed-in tariff, to provide the financial stimulus for new renewable heat deployment;
- improving the regulation of biomass heating systems to ensure that their rollout minimises the impact on air quality standards;
- providing regulatory incentives to install renewable heat technologies in new buildings through the implementation of the zero-carbon homes and non-domestic buildings initiatives;
- providing better information to consumers, businesses and Local Authorities on the potential of renewable heat, including for the planning process.⁶²

2.3 Transport

The RES states that approximately 10% of road transport fuels will need to come from renewable sources by 2020 in order to meet the EU target. The main source of renewable energy available for transport is biofuels. Biofuels are fossil fuel substitutes that can be made from organic materials including oilseeds, wheat and sugar which are typically blended with conventional petrol and diesel. In 2006 biofuels accounted for less than 1% of the UK’s road transport fuel.⁶³

There are already incentives in place to increase this proportion. The Renewable Transport Fuel Obligation (RTFO), introduced in April this year, requires fuel suppliers to ensure that road transport fuels contain 2.5% by volume of biofuels, rising to 5% in 2010. Achieving a 10% target would require a biofuel content of between 11% and 15% by volume. The EU draft Renewable Energy Directive includes a binding target for all Member States to source 10% of their transport energy consumption from renewable sources by 2020. As road transport is responsible for approximately 93% of carbon dioxide emissions from domestic transport in the UK, the RES sees this sector as the biggest opportunity for savings.

However, there has been concern expressed about the sustainability of biofuels given their impact on land use and food production. Less than two weeks after the publication of the RES, the Secretary of State for Transport, Ruth Kelly, made a statement in the House setting out the findings from a report she commissioned from Professor Ed Gallagher of the Renewable Fuels Agency on the indirect effects of biofuels production.⁶⁴ As the Secretary of State summarised, the report concluded that

⁶¹ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p112

⁶² BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p16

⁶³ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p158

⁶⁴ HC Deb 7 July 2008 c1169

there is a risk that the uncontrolled expansion and use of biofuels could lead to unsustainable changes in land use, such as the destruction of rainforest to make way for the production of crops. That might, in turn, increase greenhouse gas emissions, as well as contributing to higher food prices and shortages. The Gallagher report therefore concludes that the introduction of biofuels should be slowed until policies are in place to direct biofuel production on to marginal or idle land and until these are demonstrated to be effective.⁶⁵

Ruth Kelly said that she agreed with the key findings. She made clear, however, that although the rate of increase of the use of biofuels in the RTFO would be slowed, the EU target of 10 per cent renewable transport fuels by 2020 “can remain an overall objective, but subject to clear conditions.” She then set out what those conditions were:

First, the EU-level sustainability criteria currently being negotiated must address indirect, as well as direct, effects on land use. Secondly, the 10 per cent target must be subject to rigorous review in the light of the emerging evidence, so that we can make an informed decision at EU level in 2013-14 about whether the target can continue. As Professor Gallagher also suggests, I agree that we should aim to target support on the development of lower carbon and other so-called “second generation” biofuels.⁶⁶

Indeed the RES states that reaching the EU 2020 target would be a “significant challenge for the UK even if sustainability were not an issue” and that “some of these concerns about sustainability might be addressed by the development of ‘second-generation’ biofuels, which can be made from waste, residues and non-food crops (grown on marginal land).”⁶⁷

The RES also goes on to examine non fossil fuel based technology which could be used to help meet the EU 2020 target. This includes ‘plug-in’ hybrids which combine batteries charged from the electricity grid with a standard combustion engine, fully electric vehicles and also hydrogen fuelled vehicles powered by either an internal combustion engine or a fuel cell.

The Treasury commissioned *King Review of Low Carbon Cars* published in two parts in October 2007 and March 2008 concluded that an almost complete de-carbonisation of road transport could be possible by 2050 through the use of such vehicles.⁶⁸ The RES however states that this would require major technical improvements as well as substantial de-carbonisation of the power system – such as higher levels of renewable electricity.

The RES asks for views on potential measures to increase renewable transport in the UK. These are summarised as:

- agreeing robust sustainability criteria for all biofuel use;
- adapting the Renewable Transport Fuel Obligation (RTFO) to provide incentives for greater levels of renewable energy in transport with safeguards to ensure these levels are sustainable, and ensuring our support provides the greatest greenhouse gas savings;

⁶⁵ HC Deb 7 July 2008 c1169

⁶⁶ HC Deb 7 July 2008 c1170

⁶⁷ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p158-9

⁶⁸ HM Treasury, [The King Review of low-carbon cars](#), October 2007 and March 2008

- facilitating the development of second and third-generation biofuels, which are made from non-food sources and therefore avoid many of the sustainability concerns around current biofuels;
- extending the use of biofuels in rail transport and shipping so far as is sustainable;
- exploring the potential contribution of alternative vehicle technologies such as electric or hydrogen cars to meeting our renewable energy targets, taking into account the possible impact on electricity demand, and the potential for vehicle-to-grid technologies to help smooth electricity demand.⁶⁹

2.4 Other

Bioenergy

In addition to producing heat, biomass technologies can also be used to produce electricity. Biomass currently accounts for about 2.3% of electricity generation and less than 1% of heat generation. The RES suggests that in order to meet the EU 2020 target that biomass technology, including biogas, may need to provide about 30% of the UK's renewable electricity and heat generation.

The RES sets out that to expand resources to meet approximately 6% of the UK's overall energy demand we would need to take the following steps:

- Sourcing an additional 1 million dry tonnes of wood per year from currently unmanaged woodland in England, and from increasing the recovery of wood for energy from managed woodland and other sources of wood waste products across the UK.
- Increasing the amount of perennial energy crops produced in the UK to meet market demands. We have previously estimated that there is potential to use an additional 350,000 hectares across the UK by 2020. Combined, this would bring the total land availability for biofuel and energy crops to around 1 million hectares, equivalent to around 17% of total UK arable land.
- Increasing supply from organic waste materials such as manures and slurries, certain organic wastes, source separated waste biomass and waste derived Solid Recovered Fuels (SRF).⁷⁰

In order therefore to make the necessary increase the RES states that it will be likely that the UK will need to continue to import sustainable biomass from abroad.⁷¹ Summarising the study from 2005 from the Biomass Task Force it also sets out how development of biomass is constrained:

- the lack of a mature, robust fuel supply chain;
- lack of knowledge, interest or awareness of the potential of bioenergy; and
- lack of strong market signals and the appreciation of the true costs and long-term benefits of bioenergy, due either to regulatory or structural issues, particularly in the heat market.⁷²

⁶⁹ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p18

⁷⁰ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p184

⁷¹ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p184

⁷² BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p185

The government have currently a number of policies to promote bioenergy. These include: the UK Biomass strategy, which aims to remove or reduce the barriers identified above; the Waste Strategy, which aims to divert biodegradable waste away from landfill and to increase the recovery of energy from waste; and the Renewables Obligation, which it is hoped will provide extra encouragement for less mature biomass technologies through the banding system.

The range of measures consulted upon in the RES to encourage biomass resources include:

- ensuring the sustainability and the fuel-quality of biomass supply, both domestic and imported;
- continuing support for energy crops with research into new energy crop options; and support for local supply chain development via the Bio-Energy Infrastructure Scheme and the Bio-Energy Capital Grants Scheme;
- as far as is practical, discouraging the landfilling of biomass, thereby maximising its availability as a renewable fuel;
- considering the scope for Local Authorities to collect and separate organic food waste as far as is practical to provide an additional biomass fuel;
- encouraging Waste Incineration Directive-compliant combustion infrastructure and support for anaerobic digestion as a means of generating energy from waste;
- a biomass communications programme to raise awareness about the benefits of bioenergy including energy from waste.⁷³

Innovation

According to the RES, the “development of new and emerging renewable energy technologies will be important for meeting our 2020 target and vital for our longer term climate change goals.” It also states that market forces alone are unlikely to deliver sufficient investment in innovation. Some of the barriers to general innovation are listed as:

- **The regulatory risk faced by energy technologies** – energy technologies have a long payback time and most renewable technologies rely on specific aspects of the market design to generate a commercial return as they are more expensive than conventional generation. Any perceived uncertainty over future policy direction could make firms reluctant to invest in innovative or higher-risk technologies.
- **A particularly lengthy and expensive development process** – energy generation usually involves large, capital-intensive investments. Energy innovation therefore needs costly full-scale trials. The type of engineering and learning-by-doing associated with the energy innovation process is particularly vulnerable to free riding, as all firms benefit from lessons learned from major investments in innovation. Some innovative technologies face a high cost to establish new enabling infrastructure (for example, transmission network costs) while in competition with established technologies whose development is publicly supported.
- **The homogenous nature of electricity** – electricity is a commodity, which means there are few niche markets where developers of generation technologies can

⁷³ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p180

secure early returns. Energy companies have little appetite for using unproven and more costly technologies to deliver their basic commodity.⁷⁴

The RES does not speculate about exactly how much increased innovation could help towards meeting the EU 2020 target. It does however detail some technologies which could be developed further which would help the UK to meet its targets. These include: offshore wind power, in terms of reducing costs and risks and increasing its yield; wave and tidal stream technologies; second generation biofuels, utilising non-food materials such as wood waste, municipal waste and crop residues; bioenergy and renewable heat technologies, such as ground and air source heat pumps and solar water heating and the development of biogas; enabling technologies which would allow renewable energy to be used and distributed to the electricity grid; improving electricity supply networks to allow integration of intermittent renewable generation onto the power system; and energy storage, to allow a system for significant quantities of energy to be stored at time of low demand.

The RES seeks views on how innovation in renewable technologies can be encouraged, including whether the Renewables Obligation could be more effective at supporting emerging technologies and whether there are any barriers to support the development of such technology which are not being currently addressed.⁷⁵

3 Meeting the proposals

The RES states that if all the options set out in the strategy are “successfully implemented” and with no cost constraints, that it “will be possible to reach 15% renewable energy in the UK by 2020.” However, it goes on to caution that “this is at the top end of the range of possible outcomes and would require a very rapid response from suppliers, with a step change in the rate of building renewable technologies.”⁷⁶ The RES website states that “the level of the target will require all sectors and technologies to deliver at their maximum growth rates over the next 12 years”.⁷⁷ The RES itself also cautions that achievement of the target will depend on “the extent to which we can reduce overall energy demand” and that it will be necessary to develop a “completely new approach to renewable heat”.⁷⁸

On this subject, the Renewables Advisory Board Report felt able to forecast that 14% of UK energy could be provided by renewables on its set of identified policy changes. It stated that in order to reach 15%, that one of three “challenging alternatives” would be needed:

- Installation of the Severn Barrage, half of which would count towards the 2020 target provided construction begins before 2016.
- A further 6GW of wind power, mostly offshore, bringing the total offshore capacity to about 24GW.
- A further 30% increase in energy production from renewables in the built environment sector. This would need to be retro-fitted to existing stock, and would probably require installation of district-wide heat networks.⁷⁹

⁷⁴ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p205

⁷⁵ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, chapter 8

⁷⁶ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p6

⁷⁷ BERR, [Renewable Energy Strategy Consultation website](#) [on 10 September 2008]

⁷⁸ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p6

⁷⁹ Renewables Advisory Board, [2020 Vision: How the UK can meet its target of 15% renewable energy](#), 18 June 2008, p8

The RAB report also stated that “indeed it may be prudent to aim for a figure somewhat higher than 15% to accommodate possible failure or slippage.”⁸⁰

The RES assesses the contribution in each sector of electricity, heat and transport needed in order to make the 15% target. The main analysis put forward in the strategy suggests a scenario of 10% renewable energy from transport (compared with less than 1% today), 14% from heat (less than 1% today) and from 32% in electricity (less than 5% today).⁸¹ However, this scenario is dependant upon renewable energy in the transport sector being “feasible and sustainable”. If this turns out not to be the case, then it is acknowledged that the contribution from other sectors would therefore have to be higher, and that “in this circumstance it is unclear how we could meet the target domestically without making use of other options such as trading with other countries.”⁸²

The House of Lords Select Committee on Economic Affairs, published on 25 November 2008, [The Economics of Renewable Energy](#), expressed doubt that the current policy with the current resources will be enough to meet the EU target on time:

We recognise that the Government has committed the UK to contribute to the EU target of 20% renewable energy by 2020 and that a target of 15% for this country is envisaged. But the bulk of the evidence presented to us casts doubt whether, under current policies and with current resources, it will be feasible to increase the share of renewable energy so much in the UK over the time available. This is especially so, as most of the growth is expected to occur in power generation, which represents only a fifth of the UK's energy use, and that this growth will be largely in addition to the substantial replacement programme of old conventional and nuclear plant that has to take place over the same time period.⁸³

On 8 September 2008 the Government unveiled a new strategy for the UK's manufacturing sector, *Manufacturing: New Challenges, New Opportunities*, to help UK firms take advantage of changing global trends in manufacturing.⁸⁴ As part of this manufacturing strategy it was announced that a new Office for Renewable Energy Deployment (ORED) will be established as part of the final Renewable Energy Strategy by Spring 2009.⁸⁵ The ORED will work to address barriers to renewables deployment, such as supply chain, planning and grid issues. The manufacturing strategy states that there will be “considerable commercial opportunities available to manufacturers as the UK builds the renewable infrastructure required to meet its 2020 energy and climate change targets.”⁸⁶ It summarises that these opportunities will be based largely around research, development and deployment of offshore wind technology, fabrication, assembly, installation, operation, maintenance and component supply for onshore and offshore wind, for example generators, castings, blades and cables. The ORED will work to raise the profile of manufacturing companies in the energy supply chain and work to advise manufacturers on how they can most effectively exploit the growing renewables market.⁸⁷

⁸⁰ RAB, [2020 Vision: How the UK can meet its target of 15% renewable energy](#), 18 June 2008, p8

⁸¹ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p6

⁸² BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p7

⁸³ House of Lords Select Committee on Economic Affairs, [The Economics of Renewable Energy](#), 4th report of session 2007-08, HL Paper 195-I, 25 November 2008, para 228

⁸⁴ BERR, [Government launches new framework for UK manufacturers](#), 8 September 2008

⁸⁵ BERR, [Manufacturing: New Challenges, New Opportunities](#), 8 September 2008, p55

⁸⁶ BERR, [Manufacturing: New Challenges, New Opportunities](#), 8 September 2008, p45

⁸⁷ BERR, [Manufacturing: New Challenges, New Opportunities](#), 8 September 2008, p45-46

In a press release responding to this announcement, the British Wind Energy Association said that it welcomed the proposed ORED and said that it hoped it would “make a difference” to situations where there have been delays at deployment of renewables. It also expressed concern however that as the office will be located within BERR as “it could fail to address the lack of co-ordination between various Government departments including DEFRA, DCLG and the MOD, all of which have a stake in the deployment of renewables.”⁸⁸

3.1 Cost

Impact on energy prices

The RES recognises that renewable technologies need financial support if they are to compete with conventional energy sources and it states that as a result, “our policies to encourage renewable energy deployment in line with our 2020 goals will add further to energy bills.”⁸⁹ Current climate change polices, such as the Renewables Obligation, the EU Emissions Trading Scheme and the Carbon Emissions Reduction Target make up around 14% of average domestic electricity bills (predicted to rise to 18% by 2020) and 3% of average domestic gas bills. For industrial energy bills, this is 21% for electricity (predicted to rise to 55% by 2020) and 4% for gas. It states that whilst there will be no immediate impact on bills that the impact will increase as 2020 approaches, particularly post 2015. The impact on electricity and gas bills are set out in two tables:

Table 10.1: Impact on annual electricity bills, resulting from measures to achieve 32% renewable electricity*

	Domestic Bills	Industrial Bills
2010-2014	-1 to 4 % (-£3 to £13)	-1 to 4% (-£4 K to £19 K)
2015-2019	1 to 5% (£3 to £19)	1 to 6% (£4 K to £28 K)
2020-2024	9 to 15% (£32 to £53)	10 to 16% (£46 K to £78 K)
2025-2029	10 to 14% (£33 to £48)	11 to 16% (£48 K to £70 K)

* The range reflects the standard error of differences of changes from the status quo. In some years the impact of high penetration of renewables leads to lower short-run marginal costs which reduce wholesale prices. This impact is greater under high fossil fuel price assumptions.

Table 10.2: Impact on annual gas prices and gas bills resulting from measures to achieve 14% renewable heat.

	Domestic Prices (Domestic Bills)	Industrial Prices (Industrial Bills)
2010	0% (£0)	0% (£0)
2015	2 to 6% (£11 to £30)	3 to 7% (£3 K to £9 K)
2020	18 to 37% (£104 to £209)	24 to 49% (£29 K to £58 K)
2030	No higher than 2020	No higher than 2020

Impact on the economy

The RES states that the investment necessary to meet the target “will be of the order of £100 billion over the next 12 years”, which would be undertaken by the private sector.⁹⁰ It also cautions that increased costs caused by higher levels of renewables deployment will have a negative impact on GDP in the short-term – a reduction of 0.5% to 1%. However, it states that these impacts need to be seen in the context of global change and cites the Stern Review which estimated that the cost of not taking action against climate change would be

⁸⁸ British Wind Energy Association press release, *Office for Renewable Energy Deployment: ‘Not a moment too soon’*, 8 September 2008

⁸⁹ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p231

⁹⁰ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p2

the equivalent of losing 5% to 20% of annual global GDP. The additional cost to the UK economy of delivering the renewable deployment above the cost of meeting existing energy and climate change goals is estimated at £5 to £6 billion a year in 2020 (at today's prices). It sets out that these estimates are based on fossil fuel prices in line with \$70 bbl oil in 2020 and that if prices were higher, such as \$150 bbl oil that the costs could fall by 35% to 40%.⁹¹

The costs will also depend on the final design of the EU Renewable Energy Strategy Directive and whether trading with other EU Member States or investment in renewable energy projects outside of the EU would be allowed to count towards the target. It is estimated that allowing a limited proportion of the target to be delivered abroad would make the task "significantly less expensive" and that trading one percentage point of the target could save 15% to 20% of the cost of meeting the target domestically.⁹²

4 Reaction to the RES

In general the Renewable Energy Strategy has been welcomed. An article in the *Telegraph* reported that Alan Duncan, Shadow Secretary for Business, "endorsed" the plan,⁹³ but in a Conservatives' party press release he accused the Government of "dithering" on the issue by issuing a consultation rather than a proper strategy.⁹⁴ In the *Guardian*, Steve Webb, the Liberal Democrats' environment spokesman, is quoted as saying that he found it hard to believe Brown's talk of a "green revolution" given that Britain is near the bottom in the EU renewables league table.⁹⁵

Greenpeace reportedly describe the RES as "visionary" but expresses concern about whether the promises will actually be delivered on.⁹⁶ Friends of the Earth call the RES "a welcome sign that Ministers' thinking on green energy is moving out of the slow lane" but remains worried that the Government may "still try to wriggle out of its European commitments by counting carbon capture storage technology and investments in renewable energy projects overseas towards the targets for generating renewable energy at home."⁹⁷ They also express confusion about whether the figure of £100 billion of necessary investment includes investment that would have had to happen anyway (for example upgrading the National Grid) and state that the RES fails to reflect the benefits to the UK economy that would accrue from the expansion of renewable energy and energy efficiency.⁹⁸

The Renewable Energy Association called the strategy "significant and urgently needed" but said that the missing factor was a "greater sense of urgency".⁹⁹ It also calls for more measures to assist with making existing building stock zero carbon homes, more recognition for the role of biogas to tackle organic wastes, more support for marine renewables and a "realignment" of Ofgem's remit for carbon reduction objectives. The British Wind Energy Association (BWEA) gave an "enthusiastic" welcome to the strategy, but its chief executive cautioned that "time is running out to take real action on climate change and to plug the UK's

⁹¹ BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p237

⁹² BERR, [UK Renewable Energy Strategy](#), 26 June 2008, p9

⁹³ "Green energy plan 'will force more families into fuel poverty'", [The Telegraph](#), 26 June 2008

⁹⁴ Conservatives, [Action on renewable energy needed now](#), 26 June 2008

⁹⁵ "Brown unveils £100bn renewable energy plan", [The Guardian](#), 26 June 2008

⁹⁶ "Brown unveils £100bn renewable energy plan", [The Guardian](#), 26 June 2008

⁹⁷ Friends of the Earth, [Governments renewable energy policy is moving out of the slow lane](#), 26 June 2008

⁹⁸ Friends of the Earth, [Governments renewable energy policy is moving out of the slow lane](#), 26 June 2008

⁹⁹ Renewable Energy Association, [Renewables Industry welcomes "first step towards a comprehensive renewables strategy" but says immediate action is needed](#), 26 June 2008

looming energy gap - only swift action to unblock the planning regime and fix the grid will allow us to reach the targets on time."¹⁰⁰

Writing in an article in the *Telegraph*, the chief executive of Centrica, the parent company of British Gas, said that the RES "heralds an exciting leap forward towards a low-carbon future, with householders empowered to play a significant role alongside large-scale generators." He states that this is both "achievable and "essential", but warns that the investment needed is on an unprecedented scale. He said that the UK needs further investment in energy-saving measures, particularly at the domestic level, to help to reduce continued growth in energy usage as well as more targeted support from the Government and suppliers for those households unable to cope with the higher-priced energy environment of the future.¹⁰¹

The CBI expressed concern about the costs of the RES which would fall on business, saying that "business has long supported pragmatic and cost-effective solutions to meeting our carbon targets, but the EU renewables target is neither of these things [...] the target is likely to cost the UK an additional £6bn a year, much of which will fall on businesses and households. Some of the proposals do make good sense, such as the focus on energy efficiency, but we are concerned over whether the very high level of renewables the document envisages, particularly for electricity, is feasible and cost effective."¹⁰²

5 House of Lords Committee Report on the EU's Target for Renewable Energy

On 24 October 2008 the House of Lords European Union sub-Committee B published a report, *The EU's Target for Renewable Energy: 20% by 2020*.¹⁰³ Looking at the EU-wide target of 20% of energy to come from renewable sources by 2020, the Committee examined whether this timeframe was sensible. Some witnesses told the Committee that 20% by 2020 was too much, too soon.¹⁰⁴ Ofgem expressed concern that the target would make the EU more reliant on a single renewable energy source, wind power, given that it was the most mature renewable technology available. In a similar vein, the National Grid said that the necessary reliance on wind to meet the 2020 target may "crowd out investment in other forms of renewables".¹⁰⁵ However, the Committee also received evidence cautioning against changing to a longer timeframe now as it would cause too much uncertainty in the market for developing new technologies.¹⁰⁶ The Committee did not therefore recommend that the deadline should be extended any further.¹⁰⁷

Turning more specifically to the UK's 15% target, the Committee expressed disappointment that the Government were not doing more to consult in depth on energy efficiency as part of the RES. The Committee said that the scale of the "challenge facing the UK means that action is necessary on all fronts" and recommended that the UK should "commit to an energy reduction target, such as 20% by 2020, by the spring of 2009 with a fully worked-out strategy specifying the steps needed to achieve this."¹⁰⁸ It also suggested that the Government could

¹⁰⁰ BWEA, ["Windrush' as industry hails 'routemap for green energy revolution'"](#), 26 June 2008

¹⁰¹ "Energy security is a must - but it's going to be at a huge cost", *The Daily Telegraph*, 30 June 2008

¹⁰² CBI, [CBI Comment On Renewable Energy Plans](#), 26 June 2008

¹⁰³ House of Lords European Union sub-Committee B (internal market), [The EU's Target for Renewable Energy: 20% by 2020](#), 24 October 2008

¹⁰⁴ *Ibid*, para 20

¹⁰⁵ *Ibid*, para 20-21

¹⁰⁶ *Ibid*, para 22

¹⁰⁷ *Ibid*, para 27

¹⁰⁸ *Ibid*, paras 55 and 57

do more to treat micro-generation and renewable heat technologies as being as important as large-scale electricity generation. To achieve this it recommended that that the existing microgeneration grants should be increased and that a system of grants specifically for renewable heat should be introduced.¹⁰⁹

In regard to the planning system, the Committee received evidence that the current planning system and also the proposed new system envisaged in the Government's *Planning Bill 2007-08*, act (and would act) as barriers to timely renewables deployment.¹¹⁰ The Committee said that "strong measures are needed to improve the energy planning system" and said further measures were needed above those already set out in the RES. It recommended that planning approval for renewable energy generation over 20MW should be taken out of the hands of local councils and given to government by lowering the threshold at which consent can be given by Government under section 36 of the *Electricity Act 1989*.¹¹¹

The Committee also examined the Renewables Obligation in detail. It expressed concern that some of the provisions in the *Energy Bill 2007-08* passing through Parliament had been superseded by objectives in the RES. It recommended that the *Energy Bill* should be amended so as to allow the cap on the RO to be increased to 40% by 2020. It also urged the Government to act quickly following its consultation in order to provide a clear policy here which would allow investment decisions to be made.¹¹²

Overall the Committee expressed concern about political momentum for renewables and said that the 15% target should be viewed as a stepping stone rather than a goal in itself. It suggested that in order to provide an incentive for technology and investments which would not be fully deployed by 2020, that the Government and EU should consider also adopting a target for 2030 so as to both "sustain the overall momentum for renewables and provide an incentive for still emerging technologies, such as wave and tidal power."¹¹³

¹⁰⁹ Ibid, para 69

¹¹⁰ Ibid, paras 111-127

¹¹¹ Ibid, para 127

¹¹² House of Lords European Union sub-Committee B (internal market), [The EU's Target for Renewable Energy: 20% by 2020](#), 24 October 2008, para 156

¹¹³ Ibid, 170 and 171