



National Assembly for Wales
Cynulliad Cenedlaethol Cymru

UK Renewable Energy Strategy Consultation

This research paper provides a short synopsis of the UK Renewable Energy Strategy consultation, published by the Department for Business, Enterprise and Regulatory Reform on 26 June 2008, and with a closing date of 26 September 2008.

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UK Renewable Energy Strategy Consultation

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Executive Summary

The 2008 UK Renewable Energy Strategy consultation seeks views on how to drive up the use of renewable energy throughout the UK, as part of the UK Government's overall strategy for tackling climate change, and to attempt to meet the UK's share of the EU target to source 20 per cent of the EU's energy from renewable sources by 2020.

Many commentators consider the UK's target to produce 15 per cent of final energy demand from renewable sources by 2020 to be unachievable under current policy conditions.

The consultation, which closes on 26 September 2008, sets out a suite of policy options that could be used to deliver the 2020 target.

The Welsh Assembly Government is described as having ambitions for Wales to be producing one third more electricity than it uses by 2025, with half of this coming from wave and tidal power, one third from wind, and most of the remainder from biomass. These ambitions were described in detail in the Renewable Energy Route Map for Wales consultation document, published in February 2008.

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UK Renewable Energy Strategy Consultation

1 Introduction

The UK Renewable Energy Strategy consultation (the Consultation)¹ was published by the Department for Business, Enterprise and Regulatory Reform (DBERR) on 26 June 2008. It seeks views on how to drive up the use of renewable energy throughout the UK, as part of the UK Government's overall strategy for tackling climate change, and to attempt to meet the UK's share of the EU target to source 20 per cent of the EU's energy from renewable sources by 2020².

It is proposed that responses to the consultation will help shape the UK Renewable Energy Strategy, which will be published in spring 2009³.

The Consultation closes on 26 September 2008.

¹ DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008

² *ibid*, inside cover

³ *ibid*

2 Background to the Consultation

In January 2008, the European Commission published its binding targets for Member States to achieve⁴:

- A reduction in greenhouse gas emissions of 20 per cent by 2020
- An increase to 20 per cent of the share of renewable energies in energy consumption by 2020

These targets are split between Member States to arrive at an aggregate total. The UK's target is to produce 15 per cent of its **final energy consumption** by renewable means by 2020 (although one report suggests that trading allowances with other European countries would allow the UK's target to be revised downward to 10.4 per cent⁵). The proposal also required every Member State to achieve a minimum of 10 per cent of transport fuel to be constituted from biofuels by 2020.

Prior to the publication of these targets, the UK's target for renewable energy (under the Renewables Directive) was for 10 per cent of **electricity generation** to be renewable by 2010⁶.

In order to achieve the 10 per cent electricity generation target by 2010, the UK needs to more than double its renewable electricity generation from 4.8 per cent in 2006⁷. This target is now believed to be beyond reach⁸. However, the UK's 15 per cent target by 2020 will be far more challenging. Several factors are of particular relevance:

- It is widely believed that Member States will not achieve the target for 10 per cent of transport fuels to be biofuels (there is speculation that the target will be reviewed and adjusted downwards or removed completely⁹)
- The International Energy Association forecasts that primary energy demand in OECD countries will increase by 11 per cent between 2005 and 2030¹⁰. The UK Government's 2007 Energy White Paper predicts that energy demand in the UK "will grow over time, despite increased efficiency, as the economy expands"¹¹. In 2006, DTI forecast that energy demand would increase from 232.5 Millions of tonnes of oil equivalent (Mtoe)¹² to 234-238Mtoe in 2020¹³.
- Electricity comprised approximately 9 per cent of the UK's final energy consumption in 2006¹⁴

⁴ European Commission (2008), [Boosting growth and jobs by meeting our climate change commitments](#), 23 January 2008

⁵ Pöyry Energy Consulting (2008), [Compliance costs for meeting the 20% renewable energy target in 2020](#), p. 4, March 2008

⁶ European Parliament and European Council (2001), [Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market](#), 27 October 2001

⁷ DBERR (2007), [5.4 Fuel used in generation](#) [accessed 2 July 2008]

⁸ Cambridge Econometrics Press Release (2008), [Latest projections confirm that the Government's 2010 carbon emissions and renewables goals will be missed by a large margin and that the statutory targets for emissions in 2020 are in doubt](#), 14 March 2008

⁹ Traynor I (2008), [EU set to scrap biofuels target amid fears of food crisis](#), *The Guardian*, 19 April 2008

¹⁰ International Energy Agency (2007), [World energy outlook 2007 executive summary](#), Paris: OECD

¹¹ DTI (2007), [Meeting the energy challenge: A White Paper on energy](#), London: Department of Trade and Industry, May 2007

¹² Mtoe = million tonnes of oil equivalent

¹³ DTI (2006), [UK energy and CO2 emissions projections](#), p. 51, London: Department of Trade and Industry, February 2006

¹⁴ DBERR (2007), [1.1 Aggregate energy balance 2006](#) [accessed 2 July 2008]. Coal accounted for 18 per cent of primary energy demand, 'primary oils' accounted for 38 per cent, and natural gas accounted for 37 per cent

These factors lead to the following conclusions:

- 90 per cent or more of road transport will continue to be fossil-fuel based by 2020
- Primary energy demand will be greater in 2020 than it was in 2006

Therefore, in order to meet the 15 per cent target for renewables in primary energy demand, electricity generation will need to compensate for both the increase in total energy demand, and the shortfall in renewable transport fuel that is likely to arise. The Renewables Advisory Board (RAB) suggests that 40 per cent of grid-connected electricity will need to be generated from renewable sources by 2020, in order to meet the 15 per cent target. DBERR considers that 47 per cent of electricity will need to be generated renewably to meet the 15 per cent target¹⁵.

A memo from officials to UK Ministers, published in *The Guardian*, indicated that a high level of effort from the electricity sector would be "very costly"¹⁶. Abatement costs are estimated to be €35 per tonne of CO₂ in 2020 for electricity and heat, and €259 per tonne of CO₂ for transport¹⁷.

In its 2007 Energy White Paper, the UK Government forecast that renewable energy would fulfil 4 per cent of primary energy demand by 2020¹⁸. One recent report estimated that the UK would reach only a 5 per cent share of renewable energy in total energy consumption by 2020, unless "major, innovative policy measures" are introduced¹⁹. The Renewables Advisory Board (RAB) considers that business as usual will deliver 6 per cent of energy from renewables²⁰.

A memo from UK Government officials to UK Ministers in August 2007 recommended an approach that relies:

"on existing measures such as the EU [Emissions Trading Scheme] to deliver an increase and then simply monitoring what happens with a review between now and 2020"²¹.

The same briefing considered that a target of 9 per cent would be "challenging (but achievable?)"²², and that a more ambitious target would require flexibility to reduce costs to the UK, including "statistical interpretations of the target"²³. Scenarios envisaged by the officials to achieve a 15 per cent target required a "huge increase in deployment of renewable energy technologies" from the position of 1.5 per cent in 2005²⁴.

RAB concludes that if the 15 per cent target is to be achieved²⁵:

- Renewables must be at the heart of energy policy

¹⁵ DBERR, [Implications of higher renewables share for UK security of supply](#), slide 10, EPRG Winter Research Seminar, 13 December 2007

¹⁶ Anonymous, published in *The Guardian*, (2007), [Draft options paper on renewables target](#), p. 8 [accessed 3 July 2008]

¹⁷ Pöry Energy Consulting (2008), [Compliance costs for meeting the 20% renewable energy target in 2020](#), p. 4, March 2008

¹⁸ DTI (2007), [Meeting the energy challenge: A White Paper on energy](#), p. 106, London: Department of Trade and Industry, May 2007

¹⁹ Cambridge Econometrics Press Release (2008), [Latest projections confirm that the Government's 2010 carbon emissions and renewables goals will be missed by a large margin and that the statutory targets for emissions in 2020 are in doubt](#), 14 March 2008

²⁰ Renewables Advisory Board (2008), [2020 vision - How the UK can meet its target of 15% renewable energy](#), June 2008

²¹ Anonymous, published in *The Guardian*, (2007), [Draft options paper on renewables target](#), p. 4 [accessed 3 July 2008]

²² *ibid*, p. 8

²³ *ibid*, p. 9

²⁴ *ibid*, p. 6

²⁵ Renewables Advisory Board (2008), [2020 vision - How the UK can meet its target of 15% renewable energy](#), June 2008

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- Many new policies are required and some are very urgent

This Consultation sets out the UK Government's proposed policy changes to deliver the EU 2020 target.

3 The Consultation

The 2008 Renewable Energy Strategy Consultation (the Consultation) is set out in 11 chapters covering the following issues:

- Renewables and the energy and climate challenge
- Saving energy
- Centralised electricity
- Heat
- Distributed energy
- Transport
- Bioenergy
- Innovation
- Business benefits
- Wider impacts
- Delivering the target

3.1 Renewables and the energy and climate challenge

The chapter covering renewables and the energy and climate challenge states that renewable energy has a central role in meeting the growing policy challenges of climate change and energy security. It recognises that Government action is needed to stimulate the development of a broad portfolio of low-carbon technologies and reduce costs. Renewables, nuclear, and carbon capture and storage are highlighted within this portfolio. The chapter also recognises that reducing energy demand "will continue to be the most cost-effective way to reduce greenhouse gas emissions for some time"²⁶, and that reducing demand will also reduce the need for new energy generation capacity.

To date the main mechanism for developing renewables has been the Renewables Obligation, which is intended to deliver 10 per cent of electricity generation from renewable sources by 2010, and 20 per cent by 2020. The Renewable Transport Fuel Obligation, which started in April 2008, is intended to deliver 5 per cent of transport fuels from renewable sources by 2010. Existing policies are anticipated to lead to a 5 per cent contribution of renewable sources to final energy demand by 2020²⁷.

The Consultation expresses a desire for UK business to be "at the forefront" of shaping and benefiting from the markets for renewable energy technologies.

Meeting the target will require "a step change in the very short time scale to 2020", with investment of approximately £100 billion over the decade to 2018²⁸. The UK Government believes that the target is achievable, if extremely challenging. Different scenarios exist for the shares of renewable energy in each sector in order to achieve the target. One proposal suggests that 14 per cent of heat would be from renewable sources by 2020, 10 per cent of transport, and 32 per cent of

²⁶ DBERR (2008), [UK renewable energy strategy - consultation](#), p. 31, June 2008

²⁷ *ibid.*, p. 30

electricity. The Consultation describes these contributions as being "close to the limits of what is achievable in each sector", and these are based on assumptions of decreasing use of heat and electricity²⁹. Achieving the target is described as depending to some extent on how committed governments, businesses, communities and individuals in all parts of the UK are to achieving the goals. The illustrative scenario used sees tidal range accounting for just 1 per cent of renewable energy.

The key considerations for choosing between different delivery approaches are:

- How much of each type of renewable energy can be expected to deliver by 2020 and beyond?
- What are the net costs to society for each incremental unit of renewable energy?
- How compatible is the approach with other policies?

The Consultation describes how the UK could invest in renewables development in other countries, in order to achieve the UK target more cost-effectively³⁰. Since the Renewable Energy Directive is still being negotiated, the specifics of this option are still unclear, and a series of principles is listed that would be used to assess use of such renewables trading.

The Welsh Assembly Government published a renewable energy consultation paper in February 2008³¹.

3.2 Saving energy

Chapter 2 considers saving energy, or energy efficiency. "Using every unit of energy as efficiently as possible has to be our ultimate ambition"³². The UK Government intends to "urgently renew" its efforts to tackle barriers to energy efficiency, and will consult on a new strategy to obtain a step change in household energy efficiency later in 2008.

This chapter highlights that reducing energy demand is one of the most important steps that can be taken to meet energy and climate policy objectives. Energy demand can be reduced both by improving the efficiency of products and processes, and by changing patterns of consumption or behaviour.

Household use of electricity and heating accounts for approximately 27 per cent of UK carbon emissions. The demand for electricity in homes is currently increasing at an annual rate of 1.5 per cent³³.

A list is presented of the activities that the UK Government is undertaking to promote energy efficiency.

²⁸ *ibid*, p. 32

²⁹ DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, pp. 33-34

³⁰ *ibid*, p. 37

³¹ Welsh Assembly Government (2008), [Renewable energy route map for Wales](#), February 2008

³² DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, p. 42

³³ *ibid*, p. 45

The Welsh Assembly Government's plans for energy efficiency and small-scale generation will be expanded further in a Wales National Energy Efficiency and Savings plan, to be published for consultation later in 2008, prior to the publication of an overarching Wales energy strategy in 2009.

3.3 Centralised electricity

This chapter spells out the possibility of a third or more of the UK's electricity requirement being generated from renewable sources by 2020, compared to less than 5 per cent today³⁴. The UK "has the natural resources to fuel an increase on this scale". A description of each of the main forms of centralised renewable electricity generation follows: wind (onshore and offshore), biomass, hydro, wave and tidal.

Planning considerations are discussed. The UK Government has proposed changes to the planning system that could make the planning process for large-scale renewable projects less time-consuming (see the Members' Research Service research paper on the Planning Bill³⁵). The Marine Bill includes some provision for offshore renewables (see the Members' Research Service research paper on the Marine Bill³⁶).

The possibility of some locations receiving incentives for becoming 'pace-setters' in providing renewable generation is raised³⁷. The Renewables Advisory Board will be providing advice to the UK Government about the best way to proceed with a more structured system of local benefit from renewable energy developments.

The problem of grid connectivity is considered, which arises as a result of the transmission system in Great Britain having limited potential for accommodating further generation without further system reinforcement. All parts of Wales are classified as having 'very low' spare capacity in the system for the connection of new renewables³⁸. The UK Government is prepared to legislate if the barriers to connection are not significantly reduced by measures contemporaneously undergoing consultation under the Transmission Access Review.

In terms of financial support for renewables, the UK Government is not minded to change the Renewables Obligation scheme, although it recognises the strengths of the feed-in tariffs used elsewhere. The paper concludes that feed-in tariffs would be neither more effective, nor more efficient, at delivering the 2020 target, but it invites responses to its analysis.

Neither the National Assembly for Wales nor Welsh Assembly Government plays any part in the decision-making process for power stations over 50MW. These powers, under Sections 36 and 37 of the *Electricity Act 1989*, are fully reserved at the UK level and provide for the approval of the construction, extension and operation of a generating station over 50MW and the installation of above ground electricity lines.

³⁴ DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, p. 52

³⁵ Members' Research Service Research Paper 08/001, [Planning Bill](#), January 2008

³⁶ Members' Research Service Research Paper 08/041, [Draft Marine Bill](#), July 2008

³⁷ DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, p. 65

³⁸ *ibid*, p. 79

3.4 Heat

Chapter 4 covers heat, and informs consultees that because heat accounts for 49 per cent of final energy demand in the UK, and 47 per cent of carbon emissions, decarbonisation of heating will be vital to meet various targets. This will take the form of reducing demand through energy efficiency measures, and decarbonising heat delivery. Initial estimates suggest that about 14 per cent of heat should be delivered by renewable sources in order to meet the EU 15 per cent renewable energy target.

The different types of renewable heat generation technologies are listed and described: microgeneration heat, biomass heat, and renewable combined heat and power.

The UK Government is currently considering which market mechanism will create the best incentive for developing renewable heat. It considers that financial incentives would be more appropriate for developing renewable heat than regulation, because it targets those who can switch at lowest cost. However, the Consultation also suggests that "at a later date" there may be a case for regulating in order to increase uptake, by encouraging the use of such technologies in new build, for example³⁹.

The Consultation states that financial incentives to achieve a substantial share of renewable heat by 2020 will need to be "of an entirely different scale" than present schemes. The four categories of incentives that are explored are grants/soft loans, a bonus paid to generators of renewable heat (akin to a feed-in tariff), an obligation requiring a pre-determined share of heat to be generated renewably, and cap-and-trade or energy taxes to make conventional heating options more expensive. The paper concludes that grants look an "unattractive" option, a renewable heat incentive faces inertia and 'hassle factors', a renewable heat obligation could fit well with the UK's market-based policy landscape but faces "workability" difficulties, and measures to increase the costs of conventional heat are "unlikely to deliver the step change" required⁴⁰. The two options that are examined in depth are a renewable heat incentive and a renewable heat obligation. The paper describes the UK Government's thinking as favouring a renewable heat incentive.

Regulations may need to be updated to reflect the increasing combustion of biomass that would emerge from meeting the target.

The Welsh Assembly Government published a renewable energy consultation paper, including elements of heat and biomass, in February 2008⁴¹.

3.5 Distributed energy

This chapter covers electricity and heat that is generated on or near to the site at which it is used. Options for further supporting the development of microgeneration are considered, specifically,

³⁹ DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, p. 114

⁴⁰ *ibid*, p. 117

⁴¹ Welsh Assembly Government (2008), [Renewable energy route map for Wales](#), February 2008

rewarding domestic generation of heat and/or electricity. The UK Government considers that there are no significant differences between the effectiveness of the Renewables Obligation or feed-in tariffs in encouraging uptake of microgeneration. However, because feed-in tariffs provide more certainty for microgeneration generators, there "may be a good theoretical case for the introduction of feed-in tariffs for microgeneration"⁴². Initial ideas on introducing a feed-in tariff are discussed in greater detail in Annex 2 of the Consultation.

Research indicates that it is the policy environment that drives investment decisions rather than targets, and the UK Government is therefore minded not to introduce statutory targets for microgeneration development⁴³.

3.6 Transport

The analysis of renewable transport fuels to the 2020 target is predicated on achieving the 10 per cent requirement under the draft Renewable Energy Directive. Almost 99 per cent of transport energy consumption comes from petroleum based fuels⁴⁴. Of the total energy consumed by transport, 71 per cent is consumed by road transport, 23 per cent by aviation, 3 per cent by water transport, and 1 per cent each by electric transport (all modes) and railways.

The UK Government is committed to ensuring that only sustainable biofuels are used to attain the 10 per cent target. A series of sustainability principles has been laid down by the Renewable Transport Fuel Obligation (RTFO)⁴⁵. It is considered that the RTFO would need to be amended in order to meet the 10 per cent target by 2020, and five different options are assessed.

The Consultation notes that longer-term, biofuels may be "less suitable for road transport than other technologies" such as electric cars. Research has determined that since transport is the most carbon intensive sector per kWh of energy delivered, using renewable energy in electric vehicle batteries could save more carbon dioxide than its use in electricity generation or heat sectors⁴⁶. The advantages of electric vehicles over fossil-fuelled alternatives are listed⁴⁷. Hydrogen (from electricity) powered vehicles would increase electricity demand by about double that of vehicles powered direct by electricity⁴⁸.

Aviation is predicted to account for 11 per cent of final energy demand by 2020. No alternative fuels for flight are expected to be viable by 2020⁴⁹.

Diesel-powered trains will probably use the same blend of biodiesel as road transport. Currently, about 39 per cent of the UK rail network is electrified⁵⁰. Electric trains are more energy efficient than diesel trains, and the operational and environmental benefits of electrification are recognised by the UK Government. However, investment is currently focussed on increasing rail capacity.

⁴² DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, p. 151

⁴³ *ibid*, p. 154

⁴⁴ *ibid*, p. 158

⁴⁵ *ibid*, p. 163

⁴⁶ *ibid*, p. 171

⁴⁷ *ibid*, p. 173

⁴⁸ *ibid*, p. 174

⁴⁹ *ibid*, p. 175

⁵⁰ *ibid*, p. 176

The shipping industry will also probably use the same blend of biodiesel as road transport.

The Welsh Assembly Government's transport strategy, *Connecting the Nation*, was published in April 2008⁵¹. It includes a series of environmental objectives.

3.7 Bioenergy

Bioenergy is the production of energy from the direct or indirect combustion of biomass material. The use of bioenergy to produce heat and electricity is analysed as being one of the most cost- and carbon-effective means of achieving the 2020 target. Bioenergy currently supplies 82 per cent of the UK's total renewable energy⁵².

Heat generation is the most cost-effective energy use of biomass in terms of carbon abatement. However, the impact of increased use of biomass for heat generation on arable land use is recognised, and the criteria for the sustainability of transport biofuels are described as being "important" in the development of second- and third-generation biofuels.

3.8 Innovation

Chapter 8 focuses on the need for the renewable technologies to flourish. The Consultation states that market forces alone are unlikely to deliver the necessary investment in innovation⁵³. A variety of pricing and direct funding policies are in place to help encourage innovation. Support is also directed to specific renewables requirements, such as offshore wind, wave and tidal stream, second generation biofuels, bioenergy and renewable heat technologies, 'enabling technologies', electricity supply networks, and energy storage⁵⁴.

3.9 Business benefits

The UK Government has identified four main prerequisites for building a low-carbon economy: a clear, consistent policy framework; policies to support innovation; developing the right skills; and fostering partnerships between relevant agencies⁵⁵. The UK Government's role is seen to be important in promoting a good business climate, ensuring a long-term market for renewables, supporting new technologies, creating market opportunities, and developing skills.

The UK Government estimates that expansion in the UK renewable energy sector will create 160,000 new jobs by 2020, although it concedes that many of these may be overseas.

3.10 Wider impacts

Policies to support renewables will have an impact on climate change mitigation, although there will be less demand EU Emissions Trading Scheme allowances as a result of increased renewable

⁵¹ Welsh Assembly Government, [One Wales: Connecting the nation – the Wales transport strategy](#), April 2008

⁵² DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, p. 183

⁵³ *ibid*, p. 205

⁵⁴ *ibid*, pp. 213-217

generation. The proposed cap on emissions between 2013 and 2020 is likely to be tighter as a result, in order to ensure that the price of carbon is maintained at an appropriate level. The renewables targets will also affect the carbon budgets determined under the Climate Change Bill.

Energy from diverse renewable energy sources will help make supply more secure⁵⁶. In particular, it will reduce the UK's dependence on imported supplies of fossil fuels.

The increase in financial support for renewables will add to energy bills, and this has particular implications for households in fuel poverty. With high fossil fuel prices, the impact on bills would be lower than with low fossil fuel prices (modelling of different fossil fuel prices is included in the Impact Assessment to the Consultation). However, in the decades beyond 2020, when fossil fuels become more scarce and renewable forms of energy cheaper, consumer prices will be lower than they would otherwise have been⁵⁷.

In the short term, these costs will have a negative impact on GDP, with a reduction in the order of 0.5 to 1 per cent, and a reduction in competitiveness of between 1 and 1.5 per cent compared to what they might otherwise have been⁵⁸. However, these costs need to be considered alongside the costs to the economy of not taking action to mitigate climate change, as underlined by the Stern Report⁵⁹.

3.11 Delivering the target

The UK Government states that "significant rather than incremental change is needed" in the way various levels of government play their part in helping deliver renewable energy targets⁶⁰. Business, consumers and the third sector also have their role to play.

Individuals can help through becoming more energy efficient, using and generating renewable energy, and supporting local renewable energy schemes.

The role of local authorities is important in exercising their spatial planning powers, through becoming more energy efficient and using more renewable energy, by facilitating access to finance for renewable energy companies, and by engaging local residents in discussing renewable energy projects.

The Welsh Assembly Government is described as having ambitions for Wales to be producing one third more electricity than it uses by 2025, with half of this coming from wave and tidal power, one third from wind, and most of the remainder from biomass. These ambitions were described in detail in the Renewable Energy Route Map for Wales⁶¹. The Welsh Assembly Government's plans for energy efficiency and small-scale generation will be expanded further in a Wales National

⁵⁵ *ibid*, pp. 219-220

⁵⁶ DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, p. 229

⁵⁷ *ibid*, p. 232

⁵⁸ *ibid*, p. 237

⁵⁹ HM Treasury (2006), [Stern review final report](#), October 2006

⁶⁰ DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, p. 239

⁶¹ Welsh Assembly Government (2008), [Renewable energy route map for Wales](#), February 2008



Energy Efficiency and Savings plan, to be published for consultation later in 2008, prior to the publication of an overarching Wales energy strategy in 2009.

The UK Government has roles that have been set out in previous sections, relating to policy direction, the provision of incentives, and addressing constraints in the system. However, the public sector also spent £3.25 billion on gas and electricity in 2006, so effective procurement could make a substantial contribution to meeting the UK's 2020 target⁶². The UK Government has also initiated investigating the installation of biomass boilers in its estate.

⁶² DBERR (2008), [UK renewable energy strategy - consultation](#), June 2008, p. 249