

Power to the people

renewable energy in Londoners' homes

May 2005



Power to the people

renewable energy in Londoners' homes

May 2005

copyright

Greater London Authority
May 2005

Published by

Greater London Authority
City Hall
The Queen's Walk
London SE1 2AA

www.london.gov.uk

enquiries **020 7983 4100**

minicom **020 7983 4458**

ISBN 1 85261 719 5

This publication is printed on recycled paper

Photographs Main photo © SEA/RENUE; bottom left © Sue Williams;
bottom right © 2004 Renewable Devices Swift Turbines Ltd.

Chair's Foreword



Our domestic energy use as Londoners is a major contributor to climate change and we all need to play our part in switching over to green alternatives. Our research shows that one in five Londoners would consider installing renewable energy systems, such as wind-turbines and solar panels, in their homes. However, out of nearly 250,000 householders in the capital interested in installing such systems, only a few hundred have actually gone ahead.


We found a number of obstacles are putting people off. These include:

- Cost
- Lack of suitable information
- Problems with finding installers
- Bureaucracy

Until these products are mass produced they will be too expensive to pay for themselves. More financial support is needed while the market for renewables develops - including grants, loans and council tax breaks to reward householders and businesses installing such systems.

Better information is also required particularly guiding potential customers through all stages of the installation process and ensuring an independent comparative guide to systems and products. In addition, we need better training to ensure that more plumbers and electricians are equipped with the skills for installing renewable energy systems. Finally, we need to simplify the planning process so that people are not confronted with unnecessary red-tape when trying to make their homes greener.

London could and should be playing a leading role in promoting renewable energy. But if we are to have more than a handful of London's homes fitted with renewable energy systems we urgently need to overcome the significant obstacles that ordinary householders face. My thanks to my colleagues on the Environment Committee and to our witnesses who gave us the benefit of their views.

A handwritten signature in black ink, which reads "Darren Johnson". The signature is written in a cursive, flowing style.

Darren Johnson 26 May 2005

Environment Committee Membership & Terms of Reference

At the meeting of the Assembly on 11 May 2005, the membership and terms of reference of the Environment Committee was agreed as the following:

Darren Johnson (Chair)	Green
Murad Qureshi (Deputy Chair)	Labour
Roger Evans	Conservative
Bob Neill	Conservative
Valerie Shawcross	Labour
Mike Tuffrey	Liberal Democrat
Peter Hulme Cross	Veritas

1. To examine and report from time to time on -
 - the strategies, policies and actions of the Mayor and the Functional Bodies
 - matters of importance to Greater London
2. To examine and report to the Assembly from time to time on the Mayor's Air Quality, Biodiversity, Energy, Noise and Waste Strategies, in particular their implementation and revision.
3. To consider environmental matters on request from another standing committee and report its opinion to that standing committee.
4. To take into account in its deliberations the cross cutting themes of: the health of persons in Greater London; and the promotion of opportunity.
5. To respond on behalf of the Assembly to consultations and similar processes when within its terms of reference.

Comments on the findings and recommendations of this report are welcomed. Any comments will be considered as part of the review and evaluation of this scrutiny.

Assembly Secretariat Contacts

Anna Malos, Scrutiny Manager
020 7983 4421
anna.malos@london.gov.uk

Sue Riley, Committee Co-ordinator
020 7983 4425
sue.riley@london.gov.uk

Kelly Flynn, Senior Media Officer
020 7983 4067
kelly.flynn@london.gov.uk

Contents

Chair's Foreword	1
The Environment Committee	2
Chapter 1 Introduction	4
Chapter 2 Renewable energy in the home	7
Chapter 3 Barriers to installation	10
Chapter 4 Encouraging individual action	18
Annex A List of recommendations	26
Annex B Terms of Reference	28
Annex C Evidence	29
Annex D Orders and translations	31
Annex E Scrutiny principles	32

Executive summary

Climate change has been described as the most serious problem currently facing the UK and reducing domestic use of fossil fuels is a crucial part of combating it. In 1999, 44 per cent of the estimated 42 million tonnes of carbon dioxide produced in London were due to energy use in the home. To store this amount of carbon would require an area of fully stocked forest the size of Kent. Yet many Londoners who have tried to install renewable energy in their homes have found the process bureaucratic and difficult, and even highly motivated people have given up.

91 per cent of homeowners in London think renewable energy is a good idea and 20 per cent are likely to consider installing systems in their own home. If solar panels or mini wind turbines were fitted to the 1.5 million houses in London where owners have access to their roofs, carbon dioxide emissions would be reduced by approximately 2 million tonnes every year. This is more than the total domestic energy use of a single borough. However, only a few hundred solar water heating systems and even fewer solar electricity systems have been installed since 2000.

This report examines the barriers preventing Londoners from translating their intentions on installing renewable energy into actions and makes practical recommendations to remove those obstacles. The Committee was told about barriers in four areas: financial; lack of suitable information; problems with finding or suitability of installers, getting quotes etc; and overcoming bureaucracy and legal difficulties.

Financial issues are cited as the most significant obstacle – by nearly half of those who expressed interest in solar water heating systems. Many renewable energy products are new to the market. So those who buy now pay a premium, and yet installing renewable energy helps the wider society. For this reason, the Committee supports the introduction of a grant scheme and/or subsidised loans for low-carbon technologies that relate to their cost, stage of market development and impact on the reduction of carbon dioxide emissions. The Committee believes that economic incentives should be extended and new fiscal measures of Council Tax and Stamp Duty rebates introduced to reward those whose homes meet agreed standards.

Lack of appropriate information is also an obstacle and the Committee recommends the use of one-stop shops to support homeowners through the installation process, and an accreditation process for products. Existing information is insufficient and should be supplemented by production of a 'how to' guide that takes potential customers through all stages of the installation process and an independent, comparative guide to the different products and types of systems that can be installed.

Londoners have found difficulties choosing the right system and getting someone to install it. At the same time, installers have to complete numerous quotes before making a sale which increases price and reduces business interest in the sector. To develop confidence, further efforts to train and accredit installers in both the technical and complementary skills necessary are essential along with product certification. Market development should also be supported by the London Development Agency and London Climate Change Agency. This should include the establishment of bulk buying contracts until the market is mature.

There are still some bureaucratic barriers to be removed. Planning permission should not be necessary for small-scale renewable energy systems as long as they meet set criteria on size and visual intrusion. Finally, connection to the electricity network and accessing the full benefits of existing incentives must be made easier for the small-scale producer.

1 Introduction

We have had no problems with it [our solar hot water and solar panels] once it has been installed. It is fine. It was just the nightmare of doing it. ... The combination of the complexity, the form filling, claiming your money back, getting the scaffolding, on top of shelling out several thousand pounds before you see any of it coming back, is an absolute killer Ken Livingstone.

- 1.1 Many Londoners who have tried to green their home have discovered that it is bureaucratic and difficult. Even highly motivated people have given up in the face of the numerous barriers. Yet installing renewable energy systems in our homes is a crucial part of combating climate change because they reduce greenhouse gas emissions.
- 1.2 There is growing consensus that our climate is changing and that human factors are part of the cause¹. The Government's Chief Scientist Sir David King has said "In my view, climate change is the most severe problem that we are facing today, more serious even than the threat of terrorism"².

- 1.3 Climate change is expected to increase the frequency of extreme events such as storms, droughts and heat waves and cause a rise in sea levels³. Insurance claims for storm and flood damages in the UK have doubled to over £6 billion over the period 1998-2003, compared with the previous five years, and may triple from today's figures by 2050.⁴ See Box 1 for predictions of the impact on London if greenhouse gas emissions are not reduced.

Box 1 Predicted impacts on London's climate

By the 2080s, summers may be 50 per cent drier.

Daily maximum temperatures of 33°C, which currently occur about one day per summer, could occur 10 days every summer. This will be worsened by the urban heat island effect in London which already adds up to a further 5 to 6°C to summer night temperatures, and will intensify.

By the 2080s winters may become 30 per cent wetter, heavy winter rainfall could occur twice as frequently, and average winter wind speeds increase by as much as 10 per cent. By this time the number of storms each winter crossing the UK may increase from five (the 1961-90 average) to eight.

Increased drying of clays in summer and wetting in winter would cause increased ground movement with worsened subsidence.

Relative sea level in the Thames Estuary will rise by between 26 and 86cm and current extreme sea levels will be experienced more frequently.

Source: UKCIP and London climate change impacts study

- 1.4 It is particularly important for London to reduce its greenhouse gas emissions not only because of the likely scale of impact on Londoners, but also because its size and economic activity means the city has a similar effect on climate change as small countries such as Portugal.
- 1.5 All levels of government, including the Mayor of London, have produced strategies and policies to address climate change because of this importance. The Mayor's energy strategy⁵ was produced in February 2004 to encourage cleaner and more efficient energy use with an overall aim to reduce carbon dioxide by 20 per cent⁶ by 2010, the same as national targets. The UK Climate

¹ E.g. Feb 2005 study by Scripps Institution of Oceanography in California and Lawrence Livermore National Laboratory to analyse the effects of global warming on the oceans. For a discussion of the consensus amongst scientist and sceptical viewpoints see New Scientist Issue 4286 12 Feb 2005 p 28

² *Science* 9 January 2004: 176-177.

³ Based on findings from UK Climate Impacts Programme summarised in *London's Warming* GLA 2002.

⁴ Economic and Fiscal Strategy Report, Budget March 2005, HM Treasury

⁵ *Green light to clean power* GLA 2004

⁶ Reduction relative to 1990 levels to be reached by 2010.

Change Strategy is currently under review because the UK is no longer on track to meet Government targets, after initial success of a reduction of 7 per cent of carbon dioxide emissions. The Government has predicted that the UK will only reduce emissions by 14 per cent by the target date unless further action is taken⁷.

- 1.6 Carbon dioxide (CO₂) is a major contributor to climate change and an important source is from burning fossil fuels such as gas, oil and coal. A large part of this is through domestic use for heating space and water, for cooking and for the generation of electricity. In 1999, 44 per cent of the estimated 154 TWh of energy that London consumed, and of the 42 million tonnes of CO₂, produced were due to energy use in the home⁸. To sequester⁹, or store, this amount of carbon would require an area of fully stocked forest the size of Kent¹⁰.
- 1.7 Worryingly, at a time when efforts are being made to reduce CO₂ emissions, they increased in the UK by 2 per cent between 2002 and 2003. This increase is largely attributed to electricity production, including for domestic use¹¹. So if Londoners have electricity and heating systems that use renewable energy, rather than fossil fuels, impact on climate change can be reduced.
- 1.8 There are a variety of small scale renewable energy systems that are suitable for urban buildings including:
 - solar thermal (normally hot water heating)
 - solar power (photovoltaic cells)
 - micro-wind turbines
 - ground sourced heating or cooling
- 1.9 The Mayor includes in his Energy Strategy a specific target for installation of at least 7,000 domestic photovoltaic installations and 25,000 domestic solar water heating schemes by 2010. With these targets in mind, the London Assembly Environment Committee wanted to examine, from a Londoner's perspective, how easy it was to take action to install renewable energy systems on their homes and businesses. The Committee chose this focus to see if the most was being made of an individual's desire to make a difference and because the scale of change necessary cannot depend solely changes because of new building.
- 1.10 The Committee considered the issues through a survey of Londoner's attitudes, collecting information from interested parties, talking to people who had installed or tried to install systems in their own homes, site visits and by drawing on market research. We were interested to know what options are available to Londoners; levels of awareness and interest; what prevents people from installing renewable power systems and what support is available.
- 1.11 The Committee identified a number of areas where obstacles are preventing higher rates of installation and current support mechanisms are not having sufficient effect. These are investigated in chapter 3, *Barriers to installation*. The Committee's recommendations are given in chapter 4 *Encouraging individual action*.

⁷ For further information see Royal Society press note 16 May 2005

⁸ Energy and carbon dioxide emissions inventory for London, GLA 2002

⁹ Carbon sequestration is the storage of carbon e.g. in the wood of trees, to remove it from the atmosphere

¹⁰ Based on data from *Compensating For Carbon Dioxide Emissions By Tree Planting* Envirowise 2005

¹¹ Statistical release 130/05 Defra 21 March 2005

2 Renewable energy in the home

Benefits and motivations

- 2.1 91 per cent of homeowners in London think that renewable energy is a good idea,¹² and people commonly state they would like to reduce their impact on the environment. However, the degree to which people are prepared to or can afford to change their lifestyle varies greatly. Installing renewable energy in their own home is one of the many things that people can do where the cumulative impact of individual action can have a major impact.
- 2.2 In London alone, there are more than 1.5 million homes where the householder has access to their roof, which is more than half of all homes in the capital and about 80 per cent of houses are owner occupied¹³. If solar panels or mini wind turbines were fitted to the 1.5 million houses in London where owners have access to their roofs, carbon dioxide emissions could be reduced by up to approximately 2 million tonnes every year. This is more than is emitted by the total domestic energy use of a single borough¹⁴.
- 2.3 Example systems that can already be installed in a typical urban house are shown in Figure 1 along with average costs and benefits. It shows the substantial energy savings that can be made with these systems, but that under the present situation few systems are likely to pay through energy savings for their installation. Renewable energy installations in the home could not only reduce carbon dioxide emissions and hence reduce impact on climate change, but have other benefits to wider society. Producing energy from multiple sources increases security of energy supply and reduces energy loss through transmission where systems generate electricity.
- 2.4 In addition to the sense of 'doing their bit' for the environment, there are other benefits for individuals of installing small-scale renewable generation in their homes:
- potential for cost savings on their energy bills
 - independence from energy supply companies
 - less likelihood of being affected by power cuts, where the systems generate electricity.
- 2.5 When asked about their motivations for wishing to install a solar water heating system, people responded with the following: 54 per cent cited environmental reasons, 15 per cent saving money on their fuel bills, 5 per cent greater freedom from utility companies, 14 per cent to guard against price or fuel supply changes in the future and 10 per cent wanted to show their modernity.

Existing support

- 2.6 The Committee is encouraged to see the amount of activity that is already underway to promote renewable energy and to support Londoners in installing systems on their homes. Support for people wishing to install renewable energy is available in terms of information, cost reductions and financial incentives.
- 2.7 This assistance is available through a variety of organisations offering information and advice, and in some cases funding and support through the installation process. During 2005 there is due to be an expansion of the existing

¹² Survey for London Assembly Environment Committee for details see Annex C.

¹³ Detached, semi-detached or terraced houses. Written information from GLA based on 2001 census

¹⁴ Calculated comparing figures from the Mayor's Energy strategy and estimated per house savings.

Solar PV system

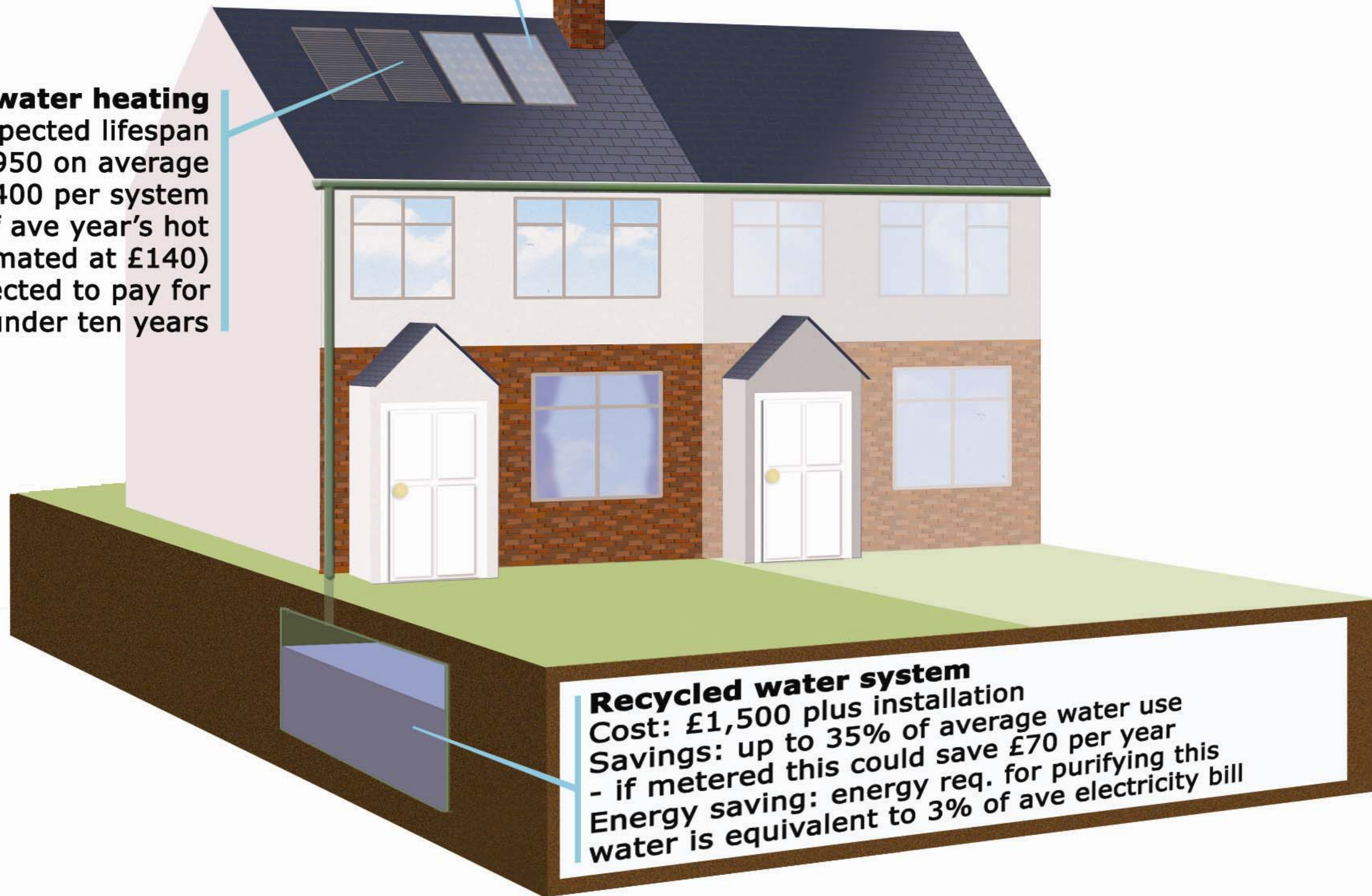
30 year expected lifespan
Cost: £8,000 - £16,000 for 2 kWp system
Grant: 50% of standard domestic system
Savings: 50% of average family electricity bill
(estimated at £310 for 3300 kWh)
Few systems expected to recoup cost of installation

Micro-wind turbine

20 year expected lifespan
Cost: £2,500 - £5,000 per kW installed
Grant: £1,000 per kW for certified models (min 0.5 kW)
1.5 kW systems will generate c.4,000 kWh per year
Savings can exceed average family's annual electricity bill
Systems expected to pay for themselves in under ten years

Solar water heating

20 year expected lifespan
Cost: £2,950 on average
Grant: £400 per system
Savings: 50% of ave year's hot water needs (estimated at £140)
Few systems expected to pay for themselves in under ten years



Recycled water system

Cost: £1,500 plus installation
Savings: up to 35% of average water use
- if metered this could save £70 per year
Energy saving: energy req. for purifying this water is equivalent to 3% of ave electricity bill

energy advice centres to widen their role and make the network of centres more comprehensive. The most important sources of information and support fall into five categories:

- National organisations, primarily the Energy Savings Trust, Clear Skies and Envirowise which operate central government programmes. These have websites and helplines to provide information, and operate or promote funding schemes.
- Local authorities. The most active authorities run energy advice centres, which provide advice, including accessing funds, and may offer additional financial support from the borough.
- Non-governmental organisations to promote sustainable energy. These provide advice, support and promote funded programmes with financial support from industry, national, or local government. They often operate centres, helplines and websites. Two organisations particularly active in London are Sustainable Energy Action RENUe and Creative Energy Network.
- Government bodies – especially the Department of Trade and Industry and Department of Environment, Food and Rural Affairs which both have useful information and links on their websites.
- Energy supply companies, suppliers and installers of renewable energy systems. Due to the pioneer status of many products, these businesses often not only promote their own work and products but also provide more general information on renewable energy.

2.8 In addition to these organisations, London now has three bodies which are active in promoting renewable energy and implementing energy policy sponsored through the Greater London Authority:

- The **London Energy Partnership** is an independent body, established by the Mayor, of stakeholders from industry, government and non-governmental organisations. It was developed to address climate change and key aspects of energy issues, such as energy services, fuel poverty, energy efficiency, renewable energy. It has adopted the objectives and targets of the Mayor's Energy Strategy and is crucial for its implementation. The Partnership was launched in January 2004.
- **London Renewables** works alongside the London Energy Partnership to ensure that London meets its renewable energy target. Its initial work has concentrated on increasing renewable energy measures in new developments.
- The **London Climate Change Agency** was formed in late 2004 to work specifically on reducing greenhouse gas emissions. The agency will seek to develop finance for energy projects across London, with initial focus on increasing the amount of local, distributed electricity generation and improving energy efficiency in existing buildings.

2.9 The Committee recognises that there has been some excellent information produced to encourage people to install suitable renewable energy systems in their homes. There are a number of useful websites, and in some areas people can contact energy action centres either through the boroughs or not-for-profit companies. Information is also available from companies promoting their products. Basic information about what renewable energy is, the main sources of renewable energy i.e. wind, sun, wave and geothermal is easily found from a

number of sources. Some leaflets and websites provide information on systems suitable for domestic houses, but these are fewer. Also available is detailed, often highly technical information about particular products from the producer or installer.

- 2.10 Central government grants available for renewable energy depend on the type of technology and are expected to be revised substantially during 2005. At present for solar electricity panels grants are provided through the PV Major Demonstration Programme managed throughout the UK by the Energy Saving Trust. For solar hot water, wind turbines or ground sourced heat pumps, the grants are provided through the Clear Skies programme and managed by the organisation of the same name. Both these programmes are operating under temporary extensions to schemes that were expected to finish in March 2005 with a smaller total amount available. The grants are not expected to meet demand during the financial year to March 2006.
- 2.11 In addition to grants, the Government subsidises those purchasing sustainable energy measures through two further mechanisms. Small scale renewable energy systems are subject to a reduced level of VAT for the purchase of these systems and businesses can claim Enhanced Capital Allowances on equipment to improve energy use. The latter is predominantly applied to improvements to increase energy efficiency and not renewable energy systems as yet.
- 2.12 Alongside these subsidies the major mechanisms for providing incentives to those generating renewable energy is through Renewables Obligations Certificates. Each supplier has an obligation to provide a certain level of renewable energy. This production is certified and the certificates are tradeable. Certificates can thus be bought by those companies which do not have a contract for sufficient renewable energy creating a market value.
- 2.13 Changes to support for renewable energy are likely to be significant during 2005 because the Government is holding an Energy review, revising the Climate Change Strategy and introducing a Microgeneration strategy. Creating a Microgeneration strategy is an obligation in the Energy Act 2004 to improve action on small scale renewables. The initial discussion paper for the Microgeneration strategy is expected to be released in summer 2005.
- 2.14 Finally, the Committee welcomes the announcement in the recent budget about additional funding for research and development in sustainable energy technologies and will be interested to see how this influences the availability of new products.¹⁵

¹⁵ Economic and Fiscal strategy report, Budget 2005.

3 Barriers to installation

3.1 81 per cent of Londoners and over 90 per cent of London homeowners considered renewable energy a good idea in principle. And our research showed 20 per cent of people were likely to consider a system in their home, which would equate to some 250 000 houses in London. This is ten times the Mayor's Energy Strategy target. Yet the number of systems installed since 2000 is only a few hundred for solar water heating and less than half this for solar electricity. Most of the people who express initial interest never end up with a system installed. According to recent research by Sustainable Energy Action only 7 per cent of people with an initial interest in solar water heating have so far agreed to or had a system installed.¹⁶ At present people's willingness to act is clearly being wasted because of obstacles that are encountered.

3.2 At the start of this report we quoted one well known Londoner about his experience having a solar hot water and a solar electricity generating system installed. Unfortunately, he is not alone in having to overcome obstacles to get what he wanted. The Committee were told about a range of barriers in four areas:

- Cost, financial and length of payback period, including lack of grants
- Lack of suitable information
- Problems with finding or suitability of installers, getting quotes
- Overcoming bureaucracy and legal difficulties

3.3 When this was researched in greater detail for solar water heating, the main reason given by people who had yet to go through with an installation are shown in Figure 2:

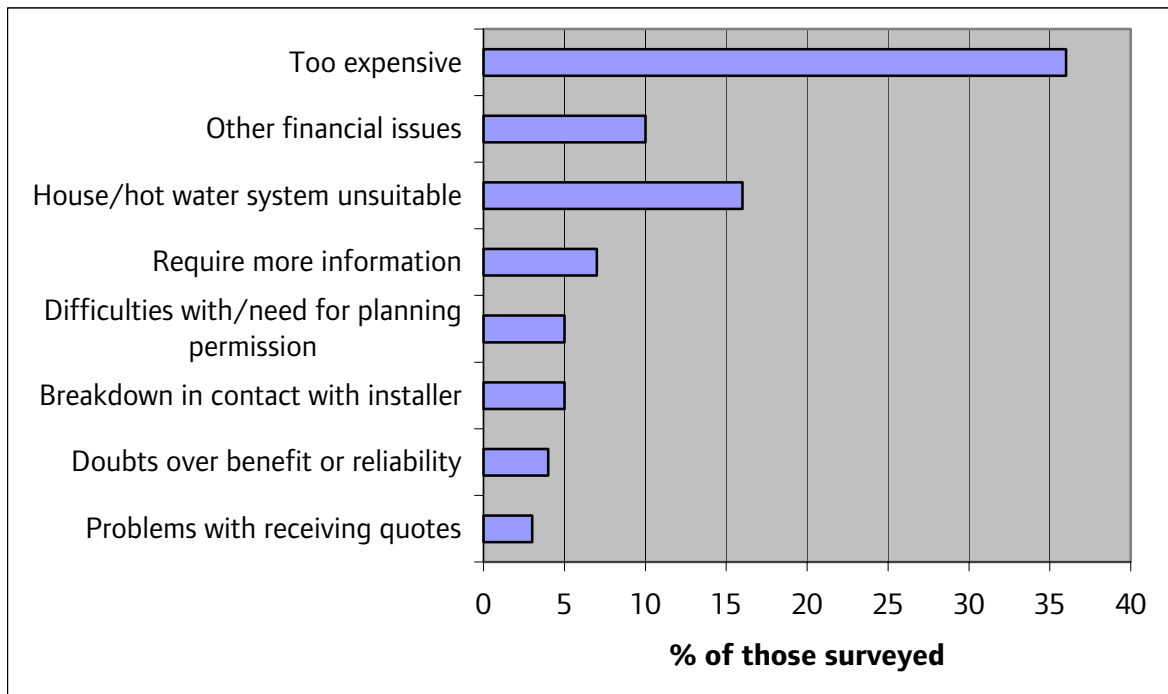


Figure 2 Barriers to solar water heating installation

¹⁶ *Barriers to the installation of solar water heating* provisional report Sustainable Energy Action 2005

Cost and value for money

I think the fundamental problem is the cost, the capital cost of the system versus the very low price of energy. If the systems were much cheaper and energy prices were higher, then everyone would have one.¹⁷

- 3.4 The cost of renewable energy systems is the most important obstacle to installation. This is partly because many people consider renewable energy mainly in terms of whether they will save money in the long run and energy prices are currently low. 44.6 per cent of respondents, who had expressed interest in solar water heating systems cited overall cost, payback period or other financial issues as reasons why they had not had a system installed. The disincentive of cost is even more apparent with solar electricity panels because of the greater expense:

I contacted a solar roofing company who quoted me £30,000 to install PV [solar electricity] tiles plus all the other bits to enable me to convert to electricity, store it, and sell my excess to the grid. So (even assuming I get a 50 per cent grant for the solar work) the cost to me is £12,000 for the conventional repair plus £15,000 for the solar work ... I guess I can only afford the conventional job, but what a pity¹⁸

- 3.5 People currently installing systems are paying a premium because they are early purchasers of the technology. Prices for technology decline rapidly once the item moves from innovation to the mainstream – DVD players were £300 for a cheap model in 1999 and now can be bought for less than £40. Plasma screen TVs have likewise dropped in price from £6000 in 2001 to £1600 for a similar model in 2005¹⁹.
- 3.6 A similar level of price reduction is expected to occur with renewable technology, but only if demand creates investment in mass production. If the same price reduction occurred as for DVD players, these systems could pay for themselves within their guaranteed lifespan. Bill Dunster, an architect actively involved in creating renewable homes, has calculated that the critical level is only 5, 000 units per year in order to shift the price of a prototype wind turbine from £8, 500 per unit to £1, 000.²⁰ This would result in it easily paying for itself within its lifespan.
- 3.7 It should be remembered that the cost of the product to be installed is only part of the cost, and that labour and ancillary costs (e.g. scaffolding) may be more important, in which case mass production will have a less dramatic impact. The cost of labour will only be reduced if time-saving techniques or products can be developed. It is also important to remember that labour costs will take into account travel time which is often greater in London and the number of quotes an installer has to make for each sale.
- 3.8 This drive to push the market into mass production is the motivation behind existing Government support for purchases of renewable energy systems. However, the current situation of low levels of take up, pay back periods that remain longer than the lifespan for products and responses of those interested in renewable energy all indicate that further financial incentives are still required.

¹⁷ Chris Dunham, SEA RENEW Evidentiary hearing December 2004

¹⁸ Correspondence from constituent to Mike Tuffrey AM. 2005

¹⁹ Figures provided by Dixons, March 2005.

²⁰ Telephone communication 18 May 2005

- 3.9 It is because of these wider benefits to society that renewable energy requires financial and legislative support from government. This is particularly true because the technologies are still at an early stage of market development and so are comparatively expensive. In effect, those people who are buying now are helping to reduce the price for people in the future.
- 3.10 There are also problems for manufacturers of renewable energy products because the available grants are expected to run out in mid-2005. To encourage investment into mass production there needs to be a reasonable level of certainty about likely market demand over a reasonable time period. That the grants available are under a temporary extension of a previous scheme goes against this need for certainty. As Samantha Heath, Chair of London Renewables stated²¹:
 we found when we did our skills study that the industry is even cutting back on skilled operatives because of the vagaries of the subsidy scheme ... A two-year to three-year grant scheme is not exactly going to provide a sustainable industry, and this is an embryonic industry
- 3.11 Grants and economic incentives clearly reduce the payback period for an installation and, where they can be paid up front, reduce the initial cost of investment. The Committee was interested to hear ideas on how installers could discount the cost of a system by paying up front the benefit gained from Renewable Obligation Certificates or Energy Efficiency Commitment incentives accrued over a number of years of clean energy generation. This is only likely where the purchaser of the system enters into some form of agreement or contract with an energy supplier who pay up front for incentives they will gain over a number of years.
- 3.12 Until recently long-term agreements were considered anti-competitive and were not possible because energy supply customers have had the right to switch supplier within 28 days as a measure to encourage competitiveness. There is a pilot relaxation of this 28 day rule and the Committee looks forward to energy supply companies using this to encourage their customers to generate power at home by supporting renewable power installations.
- Lack of information on products and installers***
- 3.13 The Committee recognises that many organisations are seeking to improve the availability of information on renewable energy including on the installation of domestic systems. However, as they would themselves recognise there are still problems. 53 per cent of people, who were interested in installing a solar hot water system, stated that they did not have easy access to enough information. In our survey of homeowners, 27 per cent of those surveyed said they were more likely to install a system having heard a summary of the costs and benefits.
- 3.14 People are still not finding the right information to match their needs and many people still do not feel well informed about the practical steps they could take to install renewable energy and reduce their impact on climate change. Judging by our survey, only a quarter of the homeowners feel that they know more than 'a little' about the systems they could have on their homes.²²
- 3.15 One problem is the variability of the access to information, particularly if you do not have access to the internet. It can be difficult to know where to ask, and

²¹ Evidentiary hearing 2 December 2004

²² From ORC Internation survey for London Assembly

only some places are served by an energy advice centre which covers renewable energy, as well as energy efficiency. Only 35 per cent of homeowners had heard of these centres. In the view of one constituent:

It is almost impossible for the ordinary consumer to find out how to install solar, wind, or geothermal energy for their home²³

- 3.16 The opposite problem tends to present itself to those who can access the internet - information is scattered across a number of different sources only some of which are inter-linked and it is difficult to tell which of these sources are up-to-date.
- 3.17 A further issue is that there seems to be a lack of detailed but non-technical information to help people choose the system or combination of systems that best suits their home and lifestyle²⁴. The problem is partly that there is insufficient independent and comparative information on the products that are available. This would be useful to help choose between products of the same technology, e.g. solar panels, but also between different types of renewable energy e.g. solar panels and wind turbines.
I want to know more about types of panels ... and I want to know which one is best²⁵
- 3.18 That this information should be independent was particularly apparent from the focus group discussions²⁶ but the implications of this has been raised by a number of other witnesses, including Samantha Heath²⁷:
the stakeholder study that we did made it very clear, in terms of quality, that people want information from trusted sources.
- 3.19 At present there is no accreditation scheme to give consumer confidence that the product they are buying meets a given standard with expected reliability and durability. This is compounded by the fact that many renewable energy systems are relatively new so there is a lack of reputation or word of mouth for the quality of the product²⁸.
- 3.20 Finally for government funded support and grants to be an incentive, people must know that they exist. Less than a quarter of homeowners we surveyed had heard of the existing grants.

Finding an installer and suitable product

- 3.21 At present installation of renewable energy products in the UK is a niche market. There are small numbers of specialist firms producing and/or installing goods, most of which are small businesses or self-employed operatives. The larger of these firms run marketing campaigns and have promotional materials including websites, but most firms rely on third parties to promote the overall market. Potential customers therefore tend to rely on Government and non-governmental organisations promoting renewable energy and trades associations such as the Solar Power Association to find installers and products.
- 3.22 Energy supply companies are starting to have a role in providing those interested in renewable energy systems with products and installers. This could be part of the energy companies shifting to what is know as a energy services

²³ Correspondence from constituent to Darren Johnson AM. November 2004

²⁴ Based on comments of participants in SEA RENEUE focus group November 2004

²⁵ Participant in focus group

²⁶ Focus group ibid

²⁷ Evidentiary hearing 2 December 2004.

²⁸ SEA RENEUE focus group

approach, rather than concentrating on the supply of units of energy e.g. gas or electricity. In this approach the focus is on providing the services supplied by energy (whether this is for keeping warm, cooking, or providing lighting) in the most effective way including by home generation. However, the provision of energy services has been identified as being 'in significant market failure' in the UK by a joint HM Treasury-Defra review²⁹ with only some energy supply companies starting to develop this approach.

- 3.23 Our investigation showed that there is a problem from the customer perspective of finding suitable installers, and also that installers have difficulties with the number of jobs they must quote for before getting a sale. 8 per cent of people surveyed, who were allocated an installer, had difficulties with getting a quote or maintaining contact with the installer³⁰. The SEA RENUÉ focus group also brought up problems with installers, as Chris Dunham summarised:

One of the problems was the way installers handled the survey [quote], and basically, they [the customer] felt they were being pushed into something, ...the Energy Savings Trust (EST) realised this with condensing boilers some time ago. They realised they needed to train installers to be sales people, and that they [the installers] did not have the marketing skills

- 3.24 The Committee notes that the work of London Renewables³¹ on skill requirements does not highlight shortages as a problem. It may be that the problem is related more to general difficulties of finding skilled, experienced trades people prepared to work on individual domestic properties in London, rather than actual skills shortages.

- 3.25 We do not wish to appear to be overly negative about installers because we heard from others who were impressed with the people that installed their systems and who went out of their way to overcome difficulties.

At the end of it all, though, the people from the company putting in both the solar panels and the PVs [solar electricity] were all excellent, and the British Gas man was brilliant³²

- 3.26 A weakness of the current situation of installations by specialist companies came to light when discussing people's experiences:

I contacted a reputable local roofing company who quoted me about £12,000 to replace the roof. I asked them to quote for PV [solar electricity] tiles on the south-facing part but they said they did not want to get involved with such things, they were a waste of time ... I contacted a solar roofing company ... I told them that the roof was in bad repair already, so they said that the roof must be in good repair before they would get involved. I cannot find a roofing company willing to ... replace the roof and install solar tiling at the same time³³.

I have an existing combi-boiler, which is old, and my front roof faces south-west which is suitable for solar panels. So I wanted to install a solar water heating system and replace my existing boiler at the same time. I haven't been able to find anyone prepared to do this and the hassle and cost of finding two different installers and co-ordinating their work doesn't bear thinking about.³⁴

²⁹ HM Treasury-Defra Energy Efficiency Innovation Review announced in the 2004 Pre-Budget Report

³⁰ SEA RENUÉ survey

³¹ *Skills and Jobs from Renewable Energy Policies and Targets* London Renewables 2004

³² Ken Livingstone, Evidentiary hearing 2 December 2004

³³ Correspondence from constituent to Mike Tuffrey AM 2005

³⁴ Correspondence from constituent to Environment Committee 2004

- 3.27 It can therefore be seen that not only is a lack of choice of products and of suitable installers a barrier to action, but this is exacerbating the weakness of the market meaning installers are less likely to move into the sector.
we will not get installers keen to do it, until we offer reasonable margins and reasonable volumes³⁵
- 3.28 In addition to the demand being low because it is still a niche market, a perhaps bigger problem for installers is that few people go on to have a system installed after getting a quote as mentioned earlier. For solar water heating panels, Solar for London figures suggest that the conversion rate between requests for quotes and installations is about 7 per cent³⁶.
- 3.29 A low take-up of quotes creates a vicious circle because more quotes per job completed leads to lower profits for installers and means that an installer is less likely to turn up to any particular job. It thus adds to the price which is bad for the customer and leads to fewer jobs for the installer.
- 3.30 In order to move into the market, installers have to undergo training, and have to invest in new equipment. For small businesses the loss of earnings through time taken up by training can often be more significant than the cost of a course. And on the subject of equipment that would reduce the time taken for installation, a specialist firm concluded:
unless you are doing 20 solar systems a year, you cannot afford that [equipment]... Thus, you have to have guaranteed sales as an installer, but if you have those guaranteed sales, it will pay for itself³⁷

Planning systems and other regulatory controls

- 3.31 The Committee found evidence of lack of consistency in the application of existing planning and building control. However, many boroughs in London still require applications and this introduces an unnecessary obstacle of cost, time and hassle to installation. Lack of consistency between local authorities seems to be coupled with low awareness amongst planning officers about what rules their borough applies. Our survey revealed that nearly 5 per cent of those people who had wanted a solar water system didn't go ahead because of the requirement for, or difficulties with, planning permission and 6 per cent of homeowners cited it as an obstacle that would discourage them.
- 3.32 As an example of the difficulties encountered, a householder has been waiting for four months for a reply to her query about whether she would require permission to install panels on her roof. Another person went through the process of requesting permission when asked and then it was later decided that the permission was not necessary³⁸. The application fee was returned, but this did not make up for other costs or the time lost in completing the application form. A similarly complicated series of event stood in the way of another witness who decided to install solar panels after having received permission for changes to their roof:
the first one [barrier] was, of course, with planning - one that comes up time and time again. I had very interesting conversations with the planning officer, who initially did not really seem to understand what I was talking about, but he instructed me to go through the complete planning process again - the complete cycle again [the

³⁵ David Matthews, Director, Themba Technology Evidentiary hearing 2 December 2004

³⁶ SEA RENUÉ survey

³⁷ *ibid*

³⁸ Written submission to Environment Committee December 2004.

installation was additional to changes already granted permission]. The fee was waived, but I did have to pay another £120 of architects' fees, and then managed ... to get it through on officer action, rather than going to the full council. Otherwise, it would have taken another six or eight weeks, and I managed to get the thing to go through in three weeks, but had I not been aware of the kind of conversations I needed to take place and been like a dog with a bone on the subject, I do not think that it would have gone through quite so easily. Other people would have given up at that point.³⁹

- 3.33 The lack of awareness of Council Officers in this area is not unexpected because the very low number of installations would mean that few would have dealt with this kind of application. This issue of low awareness is being addressed in relation to new developments and applications for large scale installations, but there is no evidence that anyone is taking steps to train planners about installations on existing homes. This also applies to those officers enforcing building regulations and their awareness about how these regulations apply to renewable energy systems.
- 3.34 The Committee welcomed the Private Members Bill on Renewable Energy in the 2004 – 05 session of parliament. This would have clarified that renewable energy systems would be considered permitted developments if they meet certain criteria for example of size. However this bill did not get agreed by Parliament before the General Election was called.
- 3.35 Some complications were mentioned by witnesses in relation to health and safety requirements and certification of products and installation equipment which were noted but not considered further.

Connecting to the electricity network

- 3.36 An area that still seems to be needlessly complicated and likely to cause Londoners delay and frustration is that of connection to the electricity supply network and benefiting from incentives for clean energy generation. The Committee welcomes the work of the Distributed Generation Co-ordinating Group⁴⁰ and recognises the advances that have been made since 2000. These include an obligation for electricity network companies to accept generation from small scale renewables, moves towards a more streamlined approach for connecting the correct type of electricity meter and better procedures for certifying products as safe to be connected to the network. However, evidence from our witnesses suggests that connection can still be cumbersome, bureaucratic and time consuming.
- 3.37 Complications with connections partly arise because the electricity generation and supply system is highly complex in the UK with different degrees of market regulation at different levels. Difficulties can arise because of a particular issue at one level of the system or from the need for the different levels and companies to co-ordinate.
- 3.38 The Committee expects further improvements to ease of connection because incentives for the electricity distribution companies are about to be brought in as part of the 2005 price review by OFGEM (Office of Gas and Electricity Markets) which regulates all aspects of the electricity market.
- 3.39 There is an economic benefit from having multiple small-scale producers close to the point of use. This is because distributed energy generation, as it is

³⁹ Dr Tony Day Evidentiary hearing 2 December 2004

⁴⁰ This is a national body of government and industry representatives which is working to tackle the practical and regulatory issues for connecting renewable electricity generating systems to the network.

known, results in lower loss of energy during transmission and greater network stability which reduces costs for the network operating companies. This is due to reducing maintenance requirements and lower network reinforcement costs. The economic benefit was estimated at £1.3bn each year if generation reached 17GW, or £30 per MWh per annum⁴¹. A standard domestic system generating electricity from wind or solar power will generate 1 – 3 MWh each year.

- 3.40 However, the Committee heard a number of examples of how insufficient financial benefits are being passed on to customers who generate their own electricity from renewables. Indeed some network operators propose charges, albeit small, for connection of small systems despite the savings that these are estimated to make. For instance, as stated by the London network operators, EDF Energy:

we are proposing that each generator [or producer of electricity] should pay something as a result of wanting to connect⁴²

- 3.41 The Committee was pleased to hear that advances are being made to allow small scale producers of renewable electricity to access financial incentives through Renewable Obligation Certificates. Until recently only those producing above a certain amount of energy were eligible. This minimum size has now been relaxed, but the procedure for receiving certificates remains complicated with a high level of bureaucracy and requirements for meters with a more exacting system of measuring and recording electricity flow. Research is underway to establish averages for different types of systems to avoid the necessity of complicated measurements and forms for smaller systems.

⁴¹ System Integration of Additional Microgeneration DTI 2004

⁴² Paul Cuttill, Chief Operating Officer Evidentiary Hearing 2 December 2004

4 Encouraging individual action

4.1 Whilst our investigation identified cost as perhaps the major barrier for people taking action, it should be recognised that it is not simply the actual cost that matters. Homeowners will spend £5-£15,000 on a new kitchen or bathroom without expecting it to pay for itself. If having solar panels or mini wind turbines became the norm, the 1.5 million houses in London (where owners have access to their roofs) could save 2 million tonnes of CO2 every year. This is more than is emitted by the total domestic energy use of a single London borough. Part of the battle is therefore to stop thinking mainly about whether renewable energy saves money. The financial payback is only part of the picture.

4.2 Until green homes do become commonplace or part of a must-have lifestyle there is still plenty that can be done. The Committee is encouraged to see the amount of activity underway to promote renewable energy and to support Londoners in installing systems on their homes. However, we still identified a number of areas where action taken now could improve the situation. These can be summarised into five areas:

- Reduce costs and increase pay backs
- Provide information about the benefits of different types of renewable energy
- Provide access to installers with guarantees of service
- Offer support to guide through process of installation
- Reduce practical obstacles

Improving cost-benefits of renewable energy products

4.3 The Committee supports Government intervention to improve the balance between costs and benefits to the customer who purchases a renewable energy system because this purchase has wider benefits to society, particularly through the reduction of greenhouse gases. With cost cited as the major barrier to installation, there is no doubt that grants encourage people to act, for instance 76 per cent of those in the SEA RENEUE survey said that more grant would encourage them to install. The Government has held informal consultations about reforming the current grant schemes for renewable energy so that rather than having different approaches for different technologies they are considered in terms of their impact on reduction of carbon dioxide emissions.

4.4 We would welcome this approach, but our investigation shows that what is of greater importance is creating greater predictability in the market. To be effective, this support needs to be consistent enough to improve investor confidence in the renewable energy sector. Any new scheme introduced should try to create a longer-term perspective than the recent yearly renewal of the grant schemes. In terms of investor confidence, the signalling to the industry of the future form and level of grant schemes is as important as the scale of the grants.

4.5 Grants are rightly just part of the package of economic measures to encourage the use of renewable energy as we have mentioned. The Committee would like to see an extension of the economic measures using changes to existing or proposed mechanisms.

- 4.6 . However, this support needs to be more effective, create a greater impact on the market dynamics and be consistent enough to improve investor confidence in the renewable energy sector.
- 4.7 Support should be in the form of both grants to reduce the cost of the product to the consumer and financial incentives so that the benefits are greater. The existing financial incentives on renewable energy are welcomed, but there are still barriers to be removed so that these incentives are readily available for small-scale installations.
- 4.8 With cost cited as the major barrier to installation, there is no doubt that grants encourage people to act, for instance 76 per cent of those in the SEA survey said that more grant would encourage installation. There have been discussion about reforming the current grant schemes for renewable energy so rather than having different approaches for different technologies they are considered in terms of their impact on reduction of carbon dioxide emissions.
- 4.9 We would welcome this approach, but our investigation shows that what is of greater importance is creating greater predictability in the market so any new scheme introduced should try and create a longer-term perspective than the recent yearly renewal of the grant schemes at comparatively short notice. In terms of investor confidence, the signalling to the industry of the future form and level of grant schemes is as important as the scale of the grants.
- 4.10 The Committee understands that Germany has a system of subsidised loans for purchasers of renewable energy systems and would like to see research into this possibility and its impact in the British situation as part of any review of financial support. We believe that this has potential for compensating for the high initial cost of a system and spreading it over its lifetime.

Recommendation 1

The Committee supports the idea of a grant scheme for low-carbon technologies that relates to their cost, stage of market development and impact on the reduction of carbon dioxide emissions, but believes that subsidised loans should also be considered. The aim of these schemes should be to encourage the move to mass production of technologies and to compensate purchasers for the premium they are paying by early take-up of the technology. The Microgeneration Strategy that is being drafted in 2005 should create the framework for a long-term approach to financial support.

- 4.11 Grants are rightly just part of the package of economic measures to encourage the use of renewable energy as we have mentioned. The Committee would like to see an extension of economic incentives using changes to existing or proposed mechanisms. Support should be in the form of both grants to reduce the cost of the product to the consumer and financial incentives so that the benefits are greater. The existing financial incentives on renewable energy are welcomed, but we would like to reiterate that there still barriers to be removed before these incentives are readily available for small-scale installations.
- 4.12 The Committee is particularly interested to ensure that small as well as large energy producers are rewarded for their environmentally conscious behaviour through the introduction of more streamlined systems to receive the financial rewards available. There are also a number of practical and legislative changes still required, to ensure that the full advantage of existing incentives for

electricity generation can be gained by the customer. These are considered in the section below on the electricity supply system.

Recommendation 2

Economic incentives for homeowners to install renewable energy should be extended by the Government, and the Mayor should lobby for these changes. Existing mechanisms such as reduced VAT rates, the green landlord scheme and the Extended Capital Allowance for businesses should cover all renewable energy technologies. New fiscal measures of Council Tax and Stamp Duty rebates should be introduced to reward those whose homes meet agreed standards on reduction of Carbon Dioxide emissions.

- 4.13 The Committee is interested in the possible expansion of renewables obligation to include a 'heat obligation' where suppliers of fuel for heating would be under a similar renewable obligation to those currently supplying electricity. We believe that this could support the consideration and installation of passive thermal and solar thermal systems, including solar hot water panels. This is currently being considered in a draft Private Members Bill but is unlikely to be passed before parliament is dissolved. This would follow the model of the existing tradable certificates for electricity generation from renewable sources. The obligation system would define the duties of fuel suppliers to encourage renewable heat production and create new financial incentives in this market.

Recommendation 3

The Committee supports in principle of the introduction of renewable heat obligation and believes the Government should develop this idea into a Green Paper put before Parliament in the next session.

Improving existing information and support services

- 4.14 The first three of these areas for action can be considered in terms of the need for information and overall support through the installation process. Witnesses called for a 'one stop shop' where people could access the information they need, go for advice and be helped at every stage of the process.
- 4.15 This support does not need to come directly from Government. If a homeowner wishes to extend their loft, there are companies that will offer not only to quote and complete the physical and design work, but also support the homeowner to get the necessary planning permission and building regulation certificate. The homeowner is supported through all the necessary steps which enables them to get what they want and the company to get their business. This model, whomever it is delivered by, will be the future for renewable energy systems. At present this is starting to happen, but this approach must be encouraged further. Examples of this approach in London are the Sunrise and Solar for London programmes.⁴³

⁴³ Sunrise is run by Creative Energy Networks and Solar for London is run by SEA RENU.

Recommendation 4

Support should be delivered through 'one stop shops' that provide information and advice through all stages of the installation process. The London Climate Change Agency should support the establishment of these one stop shops across London for all types of renewable energy. The London Climate Change Agency and the London Energy Partnership should be active in ensuring that existing and emerging support organisations and centres provide comprehensive, co-ordinated advice and that there is clarity over the role of energy services organisations in London.

- 4.16 Whilst this report has concentrated on small renewable energy systems in peoples' homes, we would stress that the same support should be offered to small businesses and non-domestic buildings, such as community centres. Whilst the exact information, requirements and incentives available are likely to differ the general type of support needed will be similar.
- 4.17 The Committee identified a number of weaknesses with the information available on renewable energy, as discussed in 3.13 – 3.20 above. In summary these are:
- access to information varies according to where you live
 - information required is still not all available from one source
 - there is a lack of detailed, but non-technical, information to aid comparison
 - people want more independent information from trusted sources
- 4.18 Despite recent initiatives, e.g. the grants leaflet by London Renewables, and existing plans by the London Energy partnership, more action is still needed. There is little doubt that the provision of more information can make a difference. 14 per cent of people who had yet to install a solar water heating system said that further information would help them go through with the installation and as already mentioned more than a quarter of homeowners were more likely to install once they had been given basic information about costs and benefits of different systems.

Recommendation 5

Existing information should be supplemented by the production of two further items updated regularly to respond to changes in financial support mechanisms and the emergence of new products:

A 'how to' guide that takes potential customers through all stages of the installation process.

An independent comparative guide to the different products and types of renewable energy systems that can be installed in homes and small businesses.

These should be funded by the Department of Trade and Industry and the London Climate Change Agency should be actively involved in their production.

- 4.19 Action should also be taken to improve consumer confidence in new and existing products in addition to the provision of comparative advice. We would suggest that this could be partly addressed by introducing a standardised system for providing consumers with information on energy generation by the product and the carbon savings that this represents. This could be modelled on the system currently used to provide information on the energy use of white goods such as washing machines. The other important area where customers would be reassured by independent information and national standards would be on the durability of products and their maintenance requirements.

Recommendation 6

The Department for Trade and Industry should establish an accreditation system to provide independently verified information on renewable energy products to sustain customer confidence in these new sectors. Alongside this, the DTI should review and revise its publicity campaigns on the existing grants available for renewable energy installations.

Improving access to skilled installers

- 4.20 Whilst the Committee noted that the work of London Renewables on skill requirements does not highlight shortages as a problem, many Londoners are still finding problems getting quotes for the work they would like to undertake. We believe that the London Development Agency should address this problem as part of the work they undertake to support the sustainable energy sector.
- 4.21 The potential advantages of better training are substantial. If heating engineers and plumbers feel confident with solar technologies they will start encouraging their clients to consider installing systems and be receptive when these systems are suggested. The market needs to move away from specialists that will only fit the renewable energy product itself to installers being able to undertake the conventional works that are likely to be part of the motivation of the homeowner to act whether this be roof or central heating repairs.
- 4.22 The survey work by SEA RENUÉ also suggested that whilst the installers may have the technical skills, they may not have the complementary marketing and customer service skills that would give greater confidence to potential

customers. As David Matthews, Director, Themba Technology put it “we need to have good solar training schemes in place”.

Recommendation 7

The London Development Agency, in conjunction with the London Climate Change Agency and Further Education and professional training bodies should introduce systems that encourages plumbers, heating engineers, electricians and roofers to train in the complementary skills required to install renewable energy systems. These systems should train and accredit installers in technical and complementary skills.

4.23 It was stressed by some of the witnesses we spoke to during the investigation that they thought the problem lay not with a shortage of people having the technical skills, but with the fact that installers could make better money either not working in London or through other conventional building works. Therefore alongside the work suggested to improve training and accreditation the Committee would like to see further work to give stability to the

Box 2 Woking Borough Council

Woking (population approximately 100,000) has installed nearly ten per cent of Britain’s solar energy photovoltaics and implemented groundbreaking work on energy and water efficiency, combined heat and power (CHP), alternative fuels for transport, fuel cells and renewable energy to help tackle climate change. This approach included investing in systems on Council owned properties and using the savings to fund further investment, establishing an energy services company as well as entering into bulk contracts for services to reduce the price. www.takingstock.org/Downloads/Case_Study_2-Woking.pdf

installation market in London. Greater stability would benefit both customers and installers. We think that the London Climate Change Agency has a vital role to play in this area modelled on the approach of Woking Borough Council as outlined in Box 2.

Recommendation 8

The London Development Agency and London Climate Change Agency should encourage market development of the renewable energy installation sector. Part of this should be through the establishment of bulk buying contracts for installers where services are sold on to consumers, until the market is mature. This role could be fulfilled through the London Climate Change Agency, energy supply companies or any company offering energy services, and should be integrated with the work of those organisation running ‘one stop shops’.

Removing planning restrictions

4.24 Some boroughs already consider appropriate renewable energy installation as permitted developments that do not require additional planning permission. How many boroughs in London still require planning applications which introduces an unnecessary obstacle of cost, time and hassle to installation. We believe that all local authorities should consider appropriate systems as permitted developments and that current planning legislation should be amended to make this clear. This would have to be supported by guidance and

training for planning officers. This should be supplemented by guidance and training on how compliance of systems with building regulations.

Recommendation 9

The installation of all small-scale renewable energy systems should be permitted developments when they meet set criteria on size and visual intrusion. The Government should introduce, and the Mayor lobby for this legislative change. London Energy Partnership should organise guidance and training for London's planning officers once this legislative change is introduced.

Electricity supply system and the supply of energy services

- 4.25 The Committee is pleased to see that the complications for small scale producers are being tackled, but believe further efforts are necessary to ensure that customers are not met with unnecessary hurdles and receive the full financial benefits from the energy they produce.
- 4.26 The introduction of two- way meters should be easy to accomplish and be obligatory. We believe that the greater information provided and the record of energy produced and used will encourage home producers and the market to produce renewable electricity and be energy efficient and allow transparent and fair pricing of energy produced and consumed. These meters should be design to meet any demands of certification under the Renewables Obligation.
- 4.27 The Committee awaits the results of pilot studies on how Renewable Obligation Certificates can be obtained by small-scale producers without the recourse to time-consuming and costly paperwork and metering systems that are inappropriate for this scale of production. Potential benefits are substantial with current rates of 6.75p/kWh for wind power⁴⁴. If all electricity produced by a home systems were applicable the certificate could generate over £200 per year from a new-generation wind turbine.
- 4.28 In addition, standard energy supply contracts must be revised to clarify that both distribution network and energy supply companies are obliged to accept home generated renewable electricity when produced by accredited products. Producers and installers should be trained and systems developed to ensure that this accreditation is straightforward and consistent.
- 4.29 We would also support changes to the restrictions on energy suppliers entering into long-term contracts with their customers. Whilst this should remain carefully monitored to prevent anti-competitive behaviour these contracts should be allowed in order to allow the supply company to pay the customer up-front for the financial benefits the company will receive through Renewables Obligation Certificates or any other similar incentives.

⁴⁴ For examples of prices see Non-fossil fuels purchasing agency website www.nfpa.co.uk

Recommendation 10

The Committee is keen to see the completion of the work of the Distributed Generation Group. We recommend that the remaining barriers, which cause connection to the network to be complex and create difficulties for accessing the full benefits of existing incentives should be removed by March 2006.

- 4.30 The Committee would stress that appropriate incentives for the electricity distribution and supply companies are necessary to help move the market from one where companies concentrate on supplying units of energy to one where they supply energy services. With this shift to the supply of energy services it will be easier to ensure that the supply of this service considers the wider implications of resource use and impact on climate change.
- 4.31 The incentives for supply companies to produce renewable electricity and the introduction of incentives for distribution companies in the latest OFGEM price review are welcomed as moves in the right direction. We will be interested to see the results of the summit on the development of energy services markets due to be hosted by HM Treasury later this year.

Annex A – Recommendations

Recommendation 1

The Committee supports the idea of a grant scheme for low-carbon technologies that relates to their cost, stage of market development and impact on the reduction of carbon dioxide emissions, but believes that subsidised loans should also be considered. The aim of these schemes should be to encourage the move to mass production of technologies and to compensate purchasers for the premium they are paying by early take-up of the technology. The Microgeneration Strategy that is being drafted in 2005 should create the framework for a long-term approach to financial support.

Recommendation 2

Economic incentives for homeowners to install renewable energy should be extended by the Government, and the Mayor should lobby for these changes. Existing mechanisms such as reduced VAT rates, the green landlord scheme and the Extended Capital Allowance for businesses should cover all renewable energy technologies. New fiscal measures of Council Tax and Stamp Duty rebates should be introduced to reward those whose homes meet agreed standards on reduction of Carbon Dioxide emissions.

Recommendation 3

The Committee supports in principle of the introduction of renewable heat obligation and believes the Government should develop this idea into a Green Paper put before Parliament in the next session.

Recommendation 4

Support should be delivered through 'one stop shops' that provide information and advice through all stages of the installation process. The London Climate Change Agency should support the establishment of these one stop shops across London for all types of renewable energy. The London Climate Change Agency and the London Energy Partnership should be active in ensuring that existing and emerging support organisations and centres provide comprehensive, co-ordinated advice and that there is clarity over the role of energy services organisations in London.

Recommendation 5

Existing information should be supplemented by the production of two further items updated regularly to respond to changes in financial support mechanisms and the emergence of new products:

A 'how to' guide that takes potential customers through all stages of the installation process.

An independent comparative guide to the different products and types of renewable energy systems that can be installed in homes and small businesses.

These should be funded by the Department of Trade and Industry and the London Climate Change Agency should be actively involved in their production.

Recommendation 6

The Department for Trade and Industry should establish an accreditation system to provide independently verified information on renewable energy products to sustain customer confidence in these new sectors. Alongside this, the DTI should review and revise its publicity campaigns on the existing grants available for renewable energy installations.

Recommendation 7

The London Development Agency, in conjunction with the London Climate Change Agency and Further Education and professional training bodies should introduce systems that encourages plumbers, heating engineers, electricians and roofers to train in the complementary skills required to install renewable energy systems. These systems should train and accredit installers in technical and complementary skills.

Recommendation 8

The London Development Agency and London Climate Change Agency should encourage market development of the renewable energy installation sector. Part of this should be through the establishment of bulk buying contracts for installers where services are sold on to consumers, until the market is mature. This role could be fulfilled through the London Climate Change Agency, energy supply companies or any company offering energy services, and should be integrated with the work of those organisation running 'one stop shops'.

Recommendation 9

The installation of all small-scale renewable energy systems should be permitted developments when they meet set criteria on size and visual intrusion. The Government should introduce, and the Mayor lobby for this legislative change. London Energy Partnership should organise guidance and training for London's planning officers once this legislative change is introduced.

Recommendation 10

The Committee is keen to see the completion of the work of the Distributed Generation Group. We recommend that the remaining barriers, which cause connection to the network to be complex and create difficulties for accessing the full benefits of existing incentives should be removed by March 2006.

Annex B - Terms of Reference

The Terms of Reference for this scrutiny were to investigate and report on:

- The nature of barriers preventing greater installation of small scale renewable energy generation in London, including:
- lack of awareness of the usefulness of local renewable energy generation and/or support available
- practical barriers to renewable energy generation e.g. cost; planning constraints; lack of commercial equipment, installers and maintainers; problems with two-way connections to the National Grid, its flexibility in handling small-scale generation
- what key organizations are doing in London to overcome these barriers; promote the advantages of small scale renewable energy generation, encourage installations and tackle any issues arising from greater local generation
- what action the Mayor and the GLA's functional bodies have taken to address this issue, the value that this has added and if/where the Mayor could do more.
- what funds and incentives should be available to bring about the scale of changes required to reduce CO2 emissions to meet UK targets.

Annex C – Evidence

To obtain any of the evidence listed, please contact Anna Malos at City Hall, e-mail anna.malos@london.gov.uk

Commissioned research

ORC International were commissioned to carry out a telephone survey of the attitudes to installing renewable energy in their homes of Londoners. 600 owners of houses were asked a series of questions about renewable energy and different systems that can be installed on homes. The results are available from the Secretariat or from www.london.gov.uk/assembly/envmtgs/index.jsp

Oral evidence

The Committee held an evidentiary hearing on 2 December 2004. Transcripts of the hearings can be downloaded from: www.london.gov.uk/assembly/envmtgs/index.jsp

Witnesses at the 2 December meeting:

Steve Cardis, Senior Urban Renaissance Planner, London Development Agency
Paul Cuttill, Chief Operating Officer, EDF Energy
Dr Tony Day, Lecturer Sustainable Energy Systems, London South Bank University
Chris Dunham – Director, Sustainable Energy Action Renewable Energy in the Urban Environment
Samantha Heath – Chair, London Renewables
Casimir Iwaszkiewicz - Construction Resources
Ken Livingstone
David Matthews, Director, Themba Technology Evidentiary hearing 2 December 2004
Jim Tame, Managing Director, Regulatory Affairs, Networks Branch, EDF Energy

Additional oral evidence

Figures on price reductions for DVD and plasma screen TVs provided by Dixons in telephone communication March 2005.
Figures on price reductions for renewable systems provided by Bill Dunster in telephone communication 18 May 2005
Confidential comments recorded from SEA RENUÉ focus group

Site visit

The Committee met with Rebecca Miller, Visitor Centre Manager at Gallions Ecopark a green housing development on 6 October 2004.

Members visited SolarCentury on 13 December 2004 for discussions with Paul Norrish Head of Business Development and Malcolm Ball, Commercial Director.

Written evidence cited

Defra 21 March 2005 *Statistical release 130/05*
DTI 2004 *System Integration of Additional Microgeneration*
Envirowise 2005 *Compensating For Carbon Dioxide Emissions By Tree Planting*
GLA 2002 *Energy and carbon dioxide emissions inventory for London*
GLA 2004 *Green light to clean power*
HM Treasury March 2005 *Economic and Fiscal Strategy Report for the Budget*
London Renewables 2004 *Skills and Jobs from Renewable Energy Policies and Targets*
New Scientist Issue 4286 12 Feb 2005 p 28
Royal Society press note 16 May 2005

Science 9 January 2004 p176-177.

Scripps Institution of Oceanography in California and Lawrence Livermore National Laboratory Study to analyse the effects of global warming on the oceans Feb 2005.

Sustainable Energy Action 2005 *Barriers to the installation of solar water heating*

UK Climate Impacts Programme findings summarised in *London's Warming*, GLA 2002.

Additional written evidence submitted

British Wind Energy Association, Mari Martiskainen Programme Assistant

Jessica Currie, Sustainable Development Policy Officer, London Borough of Lambeth

Paula Kirk - Project Manager, London Energy Partnership

Genersys - Robert Kyriakides, Chief Executive

Steve Hammer, London School of Economics

Renewable Group of the Institute of Domestic Heating & Environmental, Chris Laughton

Suzanne Le Miere – London Renewables

SEA RENU 2004/05 Evidence from survey and report on focus groups, Dr Nick Banks

Dave Sowden - Chief Executive, The Micropower Council

Dr. Jim Watson, Research Fellow, University of Sussex

Energise Engineering Ltd, Mark Peters

Thanks go to Solar for London, Renewable Devices (Swift wind turbines) and Windsave for providing photographs or models of domestic renewable energy systems

Annex D – Orders and translations

How to order

For further information on this report or to order a copy, please contact Anna Malos, Assistant Scrutiny Manager, on 020 7983 4207 or email to anna.malos@london.gov.uk

See it for free on our website - You can also view and download a copy of this report at: <http://www.london.gov.uk/assembly/reports/plansd.jsp>

Large print, Braille or translations

4.32 If you, or someone you know, needs a copy of this report in large print or Braille, or a copy of the summary and main findings in another language, then please call us on 020 7983 4100 or email to assembly.translations@london.gov.uk

আপনি বা আপনার পরিচিত কেউ এ রিপোর্টের সারসর্ম ও প্রস্তাবের কপি বিনামূল্যে বড়ছাপা বা ব্রেইল, অথবা তাদের নিজের ভাষায় চাইলে 020 7983 4100 এ নাম্বারে ফোন করুন বা ই মেইল করুন এ ঠিকানায়: assembly.translations@london.gov.uk

જો તમને કે તમે જાણતા હો તેવી કોઈ વ્યક્તિને, આ અહેવાલમાંથી કાર્યકારી સંક્ષેપ અને ભલામણોની નકલ મોટા અક્ષરોમાં છપાયેલી, બ્રેઈલમાં કે તેમની પોતાની ભાષામાં વિના મૂલ્યે જોઈતી હોય, તો કૃપા કરીને ફોન દ્વારા 020 7983 4100 ઉપર અમારો સંપર્ક કરો અથવા આ સરનામે ઈ-મેઈલ કરો assembly.translations@london.gov.uk

Se você, ou alguém de seu conhecimento, gostaria de ter uma cópia do sumário executivo e recomendações desse relatório em imprensa grande ou Braille, ou na sua língua, sem custo, favor nos contatar por telefone no número 020 7983 4100 ou email em assembly.translations@london.gov.uk

ਜੇ ਤੁਸੀਂ ਜਾਂ ਕੋਈ ਤੁਹਾਡਾ ਜਾਣ-ਪਛਾਣ ਵਾਲਾ ਇਸ ਰਿਪੋਰਟ ਦਾ ਅਗਜ਼ੈਕਟਿਵ ਖੁਲਾਸਾ ਅਤੇ ਸੁਝਾਵਾਂ ਦੀ ਨਕਲ ਵੱਡੇ ਅੱਖਰਾਂ ਵਿਚ, ਬ੍ਰੇਅਲ ਵਿਚ ਜਾਂ ਅਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਮੁਫਤ ਪ੍ਰਤ ਕਰਨਾ ਚਹੁੰਦਾ ਹੈ ਤਾਂ ਕ੍ਰਿਪਾ ਕਰਕੇ ਸਾਡੇ ਨਾਲ 020 7983 4100 ਤੇ ਟੈਲੀਫੋਨ ਰਾਹੀਂ ਸੰਪਰਕ ਕਰੋ ਜਾਂ assembly.translations@london.gov.uk ਤੇ ਸਾਡੀ ਈ-ਮੇਲ ਕਰੋ।

Si usted, o algún conocido, quiere recibir copia del resumen ejecutivo y las recomendaciones relativos a este informe en forma de Braille, en su propia idioma, y gratis, no duden en ponerse en contacto con nosotros marcando 020 7983 4100 o por correo electrónico: assembly.translations@london.gov.uk

اگر آپ یا آپ کا کوئی جاننے والا اس ایگزیکٹو سمری اور اس رپورٹ میں سے سفارشات کی ایک کاپی بڑے پرنٹ میں یا بریل پر یا اپنی زبان میں بلا معاوضہ حاصل کرنا چاہیں تو براہ کرم ہم سے فون 020 7983 4100 پر رابطہ کریں یا assembly.translations@london.gov.uk پر ای میل کریں۔

Ta ba ri enikeni ti o ba ni ife lati ni eda ewe nla ti igbimo awon asoju tabi papa julo ni ede ti abinibi won, ki o kansiya lori ero ibanisoro. Nomba wa ni 020 7983 4100 tabi ki e kan si wa lori ero assembly.translations@london.gov.uk. Ako ni gbowo lowo yin fun eto yi.

Haddii adiga, ama qof aad taqaanid, uu doonaayo inuu ku helo koobi ah warbixinta oo kooban iyo talooyinka far waaweyn ama farta qofka indhaha la' loogu talagalay, ama luuqadooda, oo bilaash u ah, fadlan nagala soo xiriir telefoonkan 020 7983 4100 ama email-ka cinwaanku yahay assembly.translations@london.gov.uk

Annex E – Principles of Scrutiny

The powers of the London Assembly include power to investigate and report on decisions and actions of the Mayor, or on matters relating to the principal purposes of the Greater London Authority, and on any other matters which the Assembly considers to be of importance to Londoners. In the conduct of scrutiny and investigation the Assembly abides by a number of principles.

Scrutinies:

- aim to recommend action to achieve improvements;
- are conducted with objectivity and independence;
- examine all aspects of the Mayor’s strategies;
- consult widely, having regard to issues of timeliness and cost;
- are conducted in a constructive and positive manner; and
- are conducted with an awareness of the need to spend taxpayers money wisely and well.

More information about scrutiny work of the London Assembly, including published reports, details of committee meetings and contact information, can be found on the London Assembly web page at www.london.gov.uk/assembly.

Greater London Authority

City Hall

The Queen's Walk

London SE1 2AA

www.london.gov.uk

Enquiries **020 7983 4100**

Minicom **020 7983 4458**