LONDONASSEMBLY

Environment Committee

Scrutiny of the Mayor's Draft Energy Strategy

July 2002

Chair's foreword

The aim of the Energy Strategy is "to develop London as an exemplary world class city for sustainable energy and enhance social, environmental and economic improvement" (paragraph 4.1 on page 51 of the Strategy). Despite the fact that it is not a statutory GLA strategy, it represents one of the major challenges for London. We must therefore start by congratulating the Mayor and his team on displaying this commitment to a sustainable approach to energy management.

We support the Mayor's proposal to set up a London Energy Partnership as a mechanism for delivering the Strategy. In this report, we give clear guidance on how we think the proposal for a Partnership should be taken forward.

It is, though, disappointing that the Strategy does not contain targets. Targets are vital; not just in their own right, but also as a means of creating momentum and ensuring the political will that is essential for this work. As a first step we urge the Mayor to set targets at a level at least equal to those of national targets.

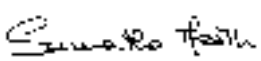
The recently published report on renewable energy from the House of Commons' Environmental Audit Committee (see Annex B of this report) highlights the challenges facing us. I am glad to see that many of the issued raised in this report have also been taken up by the Environmental Audit Committee and am interested in the recommendation that the Government should set up a Sustainable Energy Policy Agency.

Developing skills and providing training on the new forms of energy technology will be key to ensuring that Londoners benefit fully from the energy revolution. The Committee will follow this report up later this year with a wider look at how London can develop a green economy. We need to show how regeneration funding can be used to improve London's environment.

We support the Mayor's desire to make fuel poverty a thing of the past. I would point to the contribution Unison has made through its report contrasting the treatment of the fuel poor in London and Paris. The report – a Tale of Two Cities – is a clear challenge to the utility companies to play a full role in combating the problems we face in London.

I should also mention the work of the Solar City Programme. Those of us engaged in this project are encouraged by the great strides being made in developing renewable energy technologies such as solar water heating and solar panels.

Finally it is my ardent hope that the goodwill and commitment displayed in London's existing energy networks flourish under the Mayor's London Energy Partnership.



Samantha Heath
Chair of the London Assembly Environment Committee

The Committee

The London Assembly agreed at its meeting on 8 May 2002 the following membership for its Environment Committee in 2002/2003:

Samantha Heath (Chair)	Labour
Roger Evans (Deputy Chair)	Conservative
Brian Coleman	Conservative
Nicky Gavron	Labour
Darren Johnson	Green
Graham Tope	Liberal Democrat

At the 10 April 2002 meeting of the London Assembly, the Environment Committee's terms of reference were agreed:

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

as they relate to the environment and sustainable development in London

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

To consider environmental matters on request from another standing committee and report its opinion to that standing committee

To take into account in its deliberations the cross cutting themes of: the health of persons in Greater London; and the promotion of opportunity

To respond on behalf of the Assembly to consultations and similar processes when within its terms of reference.

Executive summary

The Committee welcomes the commitment the Mayor has shown to sustainable energy management in London by publishing a London Energy Strategy.

This report is divided into five main sections. Our main findings on a section by section are:

Fuel poverty and energy efficiency
The Committee joins with the Mayor in wanting to eradicate fuel poverty. We would like to see the Mayor:

- lobbying for metering to be used as a weapon to combat fuel poverty rather than as a means of perpetuating it
- supporting the Warm Zones initiative by commissioning research into how it can be made most effective
- setting a more ambitious target for improving the energy efficiency of London's homes.

Renewable energy
The Mayor has not set a renewable energy target for London. This is a missed opportunity and could serve to delay bringing about a consensus among stakeholders as to what that target should be. We recommend that the Mayor sets a target at least equivalent to that of the national target of 10% of electricity being supplied from renewable sources by 2010. This would be challenging but the lesson from other leading European cities, including Berlin and Barcelona, is that significant progress can be made in a short period of time.

The hydrogen infrastructure
Hydrogen fuel cell technology could well be one of the ways forward for London in developing a sustainable approach to energy management. We welcome the initial moves the Mayor has made in setting up a Hydrogen Partnership for London and look forward to seeing more of the details as to how the Partnership will be taken forward.

The role of planning
The recently published draft London Plan asks Boroughs to follow the Mayor's lead in promoting renewable energy for new developments in London. We welcome this and would like to see the Mayor going further by asking Boroughs to set targets for renewable energy use in their Unitary Development Plans.

The London Energy Partnership
We support the Mayor in his proposals for setting up a London Energy Partnership. It is important that the next draft of his Strategy makes it clear how the Partnership will operate in terms of its structure, how it will work with existing London energy networks, potential sources of funding for its work and the likely timetable for key milestones.

Table of contents

1 Introduction

1.1 The Mayor issued the Assembly and Functional Bodies Draft of his Energy Strategy in March 2002. The Strategy – which includes a glossary of technical terms as its first appendix – can be downloaded from the Internet via http://www.london.gov.uk/approot/mayor/strategies/energy/index.jsp

1.2 Unlike the Mayor's four other environmental Strategies – air quality, biodiversity, waste and noise – the Energy Strategy does not have statutory status.[1] This means that partnership working is key to delivering the aims and objectives of the Strategy.

1.3 This report documents the findings of the London Assembly Environment Committee's scrutiny of the Strategy and is available on the Internet via http://www.london.gov.uk/approot/assembly/reports/index.jsp

1.4 The first three chapters (2 on fuel poverty and energy efficiency, 3 on renewable energy and 4 on the hydrogen infrastructure) focus on energy issues, while the second set of chapters (5 on the role of planning and 6 on the London Energy Partnership) look at crosscutting delivery mechanisms.

1.5 A full list of recommendations to the Mayor is contained in Annex A to this report. Annex B reproduces the main findings of the House of Commons' Environmental Audit Committee report on renewable energy.

1.6 The Committee partially funded the London Health Commission's health impact assessment of the Strategy. Annex C summarises the assessment's findings. A series of evidentiary hearings and seminars were held in April, May and June 2002 and details of the participants are provided in Annex D. The Committee also invited written evidence from a wide range of stakeholders in London and beyond. Annex E lists the replies received.

1.7 The Committee would like to thank those who provided evidence whether in writing or in person and also the Greater London Energy Efficiency Network (GLEEN) and the Centre for Sustainable Energy (CSE) who provided technical consultancy support to the Committee during the course of the scrutiny.

[1] The Energy Strategy is not statutory as it is not one of the Strategies required by the GLA Act 1999

2 Fuel poverty and energy efficiency

2.1 Fuel poverty and energy efficiency are linked in that gains in energy efficiency have an immediate and noticeable improvement on the homes of the fuel poor.[2] This section looks at:

- Eradicating fuel poverty, key to improving the comfort of many Londoners' homes and their own health
- Promoting energy efficiency, a measure which could bring tremendous environmental benefits in a short period of time.

Eradicating fuel poverty

2.2 The Mayor intends to back constructive initiatives in the fields of renewable energy, fuel poverty and energy policy more generally.[3]

2.3 The specific policies and proposals which relate to fuel poverty include:

- London should take a proactive approach to eradicating fuel poverty[4]
- The Mayor will support energy supply and distribution companies in their work to provide energy services, provide alternative transport fuels, increase the proportion of electricity from renewable sources and eradicate fuel poverty in the capital[5]
- London should work to ensure that no person is living in fuel poverty in London by 2010[6]
- Through the London Energy Partnership the Mayor will work with Boroughs towards meeting their statutory obligations and eradicating fuel poverty in London[7]
- The Mayor will encourage the London Energy Partnership to initiate a London wide Fuel Poverty Programme to tackle fuel poverty in London.[8]

2.4 Fuel poverty in London is a stark reminder of the challenges facing the Mayor and the proposed London Energy Partnership – further detail on the Partnership is given in section 6 of this report. Despite the fact that certain fuel prices are falling, the price for fuel for those who can least afford it is still relatively high in comparison with levels of disposable income.

2.5 The importance of tackling fuel poverty in London is emphasised by the trade union Unison's report A Tale of Two Cities, which concludes that "we believe that everybody should be entitled to an adequate supply of power to ensure that they can light and heat their home… The fuel poor are disadvantaged in a number of ways. First they have to pay a higher proportion of their income for these essentials. In London they actually pay more for their fuel than other consumers. Secondly, the attitude to disconnection is different in Paris and London. Yet EdF,

[2] Energy efficiency is making the best use of energy. Fuel poverty refers to people not being able to afford to heat their homes to an adequate standard
[3] Paragraph 4.6, p.53 of the Strategy
[4] Policy 1, p.66 of the Strategy
[5] Policy 31, p.148 of the Strategy
[6] Policy 5, p.72 of the Strategy
[7] Policy 28, p.146 of the Strategy
[8] Proposal 76, p.157 of the Strategy

a state owned French company, supplies electricity to both cities".[9] The Parisian notion of a right to fuel for all members of society is an important one for London.

2.6 The Mayor needs to tackle the issue of metering. The high standing charges for those using the powerkey metering system whilst discussed in the Strategy is not addressed in policy terms.

2.7 One possible solution to this problem is the introduction of smart meters which are the energy equivalent to the cheapest phone tariffs. The Mayor should build on the work already being done in this area by the Northern Ireland Assembly, the Economic and Social Research Council and University of Greenwich. Any London attempt to influence policy on meters will need to be in conjunction with the utilities and Ofgem, the Government's regulator.

2.8 The Strategy does not make it clear which definition of income should be used to define fuel poverty. This is particularly important for London, and National Energy Action and the National Right to Fuel Campaign are clear in their written evidence to the Committee that a household spending more than 10% of its disposable income on energy should be used, adding over 150,000 more London homes to the 500,000 defined under the Government's measure of basic income.

2.9 Warm Zones, a concentrated multi-agency approach to tacking fuel poverty in a given location, are a high profile initiative to combat fuel poverty. London has its own Warm Zone in Newham.

2.10 It is our view that Warm Zones should have been given a section in the Strategy in their own right. Coordinating activities in London is fundamental to eliminating fuel poverty. The Mayor should encourage local authorities to adopt a similar approach in affordable warmth strategies, particularly through adopting a systematic approach to combating fuel poverty.

2.11 The Strategy should give more details of how the Mayor intends to co-ordinate funds, so that he can build on the experience of Newham Warm Zone and encourage similar initiatives in other parts of London. This, in turn, should feed into lobbying the Government to change national policy so that the commitment to energy efficiency can be better co-ordinated with Warm Front.[10] The role of regeneration programmes, such as those under the Single Regeneration Budget, in combating fuel poverty should also be considered.

2.12 Transco's affordable warmth programme has not been very successful.[11] Few local authorities are engaging with it and Transco is switching its social programmes towards supporting Warm Zones.

2.13 The Strategy states that London should work to ensure that no person is living in fuel poverty in London by 2010 and that no home should have a SAP energy rating of less than 30 by 2010.[12]

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[9] Quoted from the conclusion of a Tale of Two Cities
[10] Paragraph 5.39, p.72 of the Strategy
[11] Paragraph 3.49, p.45 of the Strategy
[12] Policy 5, p.72 of the Strategy and Proposal 3, p.73 of the Strategy, SAP is the Government's Standard Assessment Procedure for the energy rating of dwellings and is on an index from 0 to 120 with 0 being the least energy efficient

2.14 We welcome the fact that the target for eradicating fuel poverty goes further than the UK fuel poverty strategy – the UK strategy goes as far as seeking to end fuel poverty for vulnerable households by 2010. The difference is this that the term vulnerable households used in the UK strategy excludes the 20% of those households which are considered to be fuel poor but are not considered to be vulnerable.

2.15 The Mayor considers that no home should have a SAP of less than 30 by 2010. We feel that this is a very conservative target if it is to contribute to the eradication of fuel poverty in London. 70% of those living in fuel poverty occupy homes with a SAP of over 30.[13] A SAP of at least 60 should be the target.

2.16 In setting a target for fuel poverty, the components should include a measure of fuel prices in addition to targets for the energy efficiency of the property.

2.17 The current Home Energy Conservation Act (HECA) work in London has been valuable and the work of the HECA forum should form part of the London Energy Partnership (see section 6 of this report). The priority needs to be establishing a single database on the energy efficiency of all London's homes across all housing sectors.

Promoting energy efficiency

2.18 Policies and proposals on energy efficiency include:

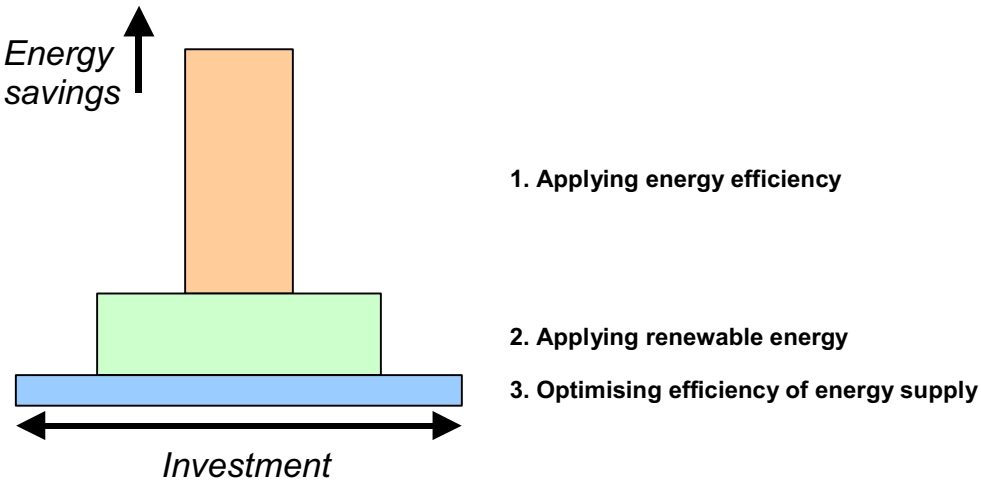
- Through the Spatial Development Strategy, statutory consultations and planning referrals, the Mayor will work to ensure that, as far as possible, development is exemplary and demonstrates the highest standards of sustainability to deliver the objectives of the Energy Strategy. The Mayor encourages Boroughs to do the same[14]
- The Mayor supports the work of the Energy Savings Trust and will work with it through the London Energy Partnership to increase the number of London households and businesses accessing information, advice and grants for energy efficiency, renewable energy and hydrogen fuel cell applications[15]
- For planning decisions on all commercial and residential heating schemes, the Mayor expects demonstration of the following ranking methods for heating systems. Renewable energy should be considered first (preferably to fuel combined heat and power and community heating), then community heating with combined heat and power, then community heating, then gas condensing boilers, and then gas central heating. Boroughs should expect the same.[16]

2.19 We welcome the Mayor's Energy Hierarchy, which aims to meet essential energy needs through applying energy efficiency measures first, then through renewable energy technologies and lastly through optimising the efficiency of energy supply.[17] However, written evidence from Creative Environmental Networks suggests that the hierarchy be modified to emphasise the quick wins to be had from applying energy efficiency. Figure 1 below, submitted by Creative

[13] Table 4.6 of the UK Fuel Poverty Strategy
[14] Policy 12, p.87 of the Strategy
[15] Policy 30, p.147 of the Strategy
[16] Proposal 8, p.91 of the Strategy
[17] Paragraph 4.3, p.52 of the Strategy

Environmental Networks, illustrates that for a small investment in energy efficiency substantial energy savings can be made. We concur with this view.

Figure 1: An energy hierarchy



2.20 The Committee recommends that an additional item go at the top of the energy hierarchy: energy conservation, as changing behaviour should be the first step in promoting sustainable energy use.

2.21 Written evidence from one of London's MEPs, Jean Lambert representing the Green Party, makes the point that energy conservation is fundamental to reducing carbon dioxide emissions. A reduction in carbon dioxide emissions would go some way to slowing down the rate of climate change. Berlin and Bologna both identified energy awareness as a precondition of reduction in their energy strategies. Indeed the Berlin Energy Concept's four cornerstones are instructive for London:

- energy awareness
- a balance between city responsibilities and district participation
- fiscal and time bound targets
- a developed action programme.

2.22 The Mayor should do all he can to promote energy awareness and conservation and we suggest that as a first step he should dedicate a section of the Strategy entirely to this subject.

2.23 It is not yet clear how London's five energy efficiency advice centres are to disseminate their knowledge throughout London. The Energy Savings Trust as a grant provider has a role to play alongside the Mayor and the London Energy Partnership. Indeed the Trust has recently approved grants totalling £120,000 to two of London's energy efficiency advice centres at Waltham Forest and Croydon. There needs to be transparency in joint working arrangements so maximum value is gained from the funds available. In this way London can make further progress in promoting energy efficiency in homes.

Recommendations on fuel poverty and energy efficiency

Recommendation 1

The Mayor should set the London Energy Partnership the task of developing a fuel poverty strategy for London.

Recommendation 2

The Mayor should encourage utility companies to invest in smart metering as a means of reducing energy bills for those in poverty.

Recommendation 3

The Mayor should support Warm Zones by commissioning research into the most efficient and effective way they can operate.

Recommendation 4

The Mayor should define fuel poverty in the Strategy as a household spending more than 10% of its disposable income on fuel.

Recommendation 5

The Mayor should set a more ambitious target for improving the SAP rating of homes of the fuel poor. The suggested target of a SAP rating of 30 by 2010 is insufficient and should be at least 60.

Recommendation 6

The Mayor should incorporate into his fuel poverty target a measure of fuel price in addition to the energy efficiency of the home.

Recommendation 7

The Mayor should dedicate a section of the Strategy to energy conservation and place it at the top of the energy hierarchy.

Recommendation 8

The Mayor should work with others to establish a single database recording the energy efficiency data for all London homes.

Recommendation 9

The Mayor should ensure that maximum value is gained from the work of London's five energy efficiency advice centres by integrating funding streams for energy efficiency initiatives in London.

3 Renewable energy

3.1 Renewable energy is one of the major aspects of sustainable energy management in London.[18]

3.2 This section of the report covers:

- Energy supply
- Renewable energy and new technologies
- Combined Heat and Power.

Energy supply

3.3 The Strategy's objective is "to reduce London's contribution to climate change through minimising emissions of carbon dioxide from all sectors – domestic, commercial, industrial and transport – through energy efficiency, combined heat and power and community heating, renewable energy and hydrogen".[19]

3.4 Policies and proposals on energy supply include:

- Supporting energy supply and distribution companies in their work to provide energy services, providing alternative transport fuels, increasing the proportion of electricity from renewable sources and eradicating fuel poverty in the capital[20]
- Encouraging the energy supply industry to exploit opportunities to increase generation from renewables and Combined Heat and Power in London[21]
- Working with London Waste Limited, SELCHP, the waste disposal authorities, Boroughs and local industry to explore the opportunities to develop heat distribution networks to supply heat from the existing incineration plants to housing, commercial and public buildings in the vicinity.[22]

3.5 It is disappointing that the Strategy gives minimal coverage to the issue of energy supply. Energy supply should be an integral part of an energy strategy. London's investment and purchasing power mean that there is enormous potential to influence energy supply. To exclude energy supply from the Strategy is to miss a significant opportunity to bring about change.

3.6 The idea of encouraging renewable energy supply based on European experience is interesting and worthwhile. It would be strengthened by the addition of an associated proposal in the Strategy.

3.7 The Strategy would benefit from an implementation plan with targets for the implementation of a sustainable energy supply within London, accepting that conventional fuels will have to provide the bulk of energy supply in the short and medium term.

[18] Renewable energy is derived from a naturally recurring source such as wind, wave or solar (light from the sun)
[19] Paragraph 4.2, pages 51 and 52 of the Strategy
[20] Policy 31, p.148 of the Strategy
[21] Proposal 61, pages 148 and 149 of the Strategy
[22] Proposal 64, pages 149 and 150 of the Strategy – SELCHP is Lewisham's South East London Combined Heat and Power waste incineration plant

3.8 The Mayor should also provide scenarios for the use of all fuels, both conventional and renewable and how they relate to targets for reductions in carbon dioxide emissions. These scenarios would help to decide whether there will be sufficient fuel to enable economic and housing growth within given carbon targets, and the role of energy efficiency in reducing demand. Consideration also needs to be given to the infrastructure requirements of a shift from conventional to renewable sources of energy.

3.9 The national and local electricity distribution network has developed around centralised power stations transmitting energy to local outlets. It is not equipped to deal with a network of decentralised renewable energy power stations. The Strategy needs to show how this obstacle can be overcome and consider to what degree, if any, the greater use of smaller, local networks will make a difference.

Renewable energy and new technologies

3.10 Policies and proposals on renewable energy and new technologies include:

- The Mayor considers that London should seek to maximise its own generation of renewable energy and use its considerable purchasing power to support renewable energy across the rest of the UK[23]
- The Mayor will support the development of hydrogen and fuel cell technologies in London as a means of providing low and zero emission energy[24]
- The Mayor opposes the development of any new nuclear power capacity in the UK, and wishes to see renewables and low carbon energy technologies replace current nuclear power stations when these are decommissioned from 2005 onwards[25]
- Through the London Plan and planning referrals, the Mayor will strive to encourage and facilitate deployment of renewable energy in London[26]
- The Mayor will work with the London Energy Partnership to lobby government for reform in national policy, regulation and legislation, where this would support London in its work to supply and use energy in more sustainable ways[27].

3.11 Renewable energy cannot be regarded in isolation and must be seen as part of a sustainable energy strategy for London. The first priority in London must be to improve the efficiency of the existing stock of domestic and commercial buildings. Indeed Energy Minister Brian Wilson has indicated that renewable energy can be seen as a mechanism for eliminating fuel poverty.

3.12 From the evidence that the Committee took it is clear that a specific action plan for renewable energy is necessary if London is to play a full part in delivering its share of the UK strategy and target.

[23] Policy 4, p.69 of the Strategy
[24] Policy 9, p.81 of the Strategy
[25] Policy 10, p.82 of the Strategy
[26] Policy 14, p.93 of the Strategy
[27] Policy 36, p.158 of the Strategy

3.13 In order to deliver this vision the evidence is unequivocal and we must:

- Set clear targets
- Create the demand for renewable energy by setting clear guidelines for Boroughs in the Mayor's Spatial Development Strategy
- Provide good examples, particularly from TfL as a major procurer. In this way emerging energy technologies will be attracted to London and Londoners will benefit from the manufacturing and job opportunities created
- Establish what skills will be required in order to deliver to that programme and plug any gaps in skills.

3.14 In its illustrative scenarios the ETSU report shows that the main technologies contributing to any renewable energy target for 2010 will be (in order of magnitude):

- Combined Heat and Power plant powered by wood and forestry wastes
- Anaerobic digestion plants
- Wind turbines (large and small scale)
- Solar (water heaters, photovoltaics and passive solar design). [28]

3.15 We expect the Mayor to identify targets for each of these technologies, and the key organisations which will deliver them.

3.16 In the short to medium term it may be useful to consider the renewable energy target for London in a different way. That is, the target could be set as a percentage of electricity supplied to London from renewable sources elsewhere in the UK rather than renewable energy solely generated in London. This releases London from the geographic constraints that limits its contribution to the development of renewable energy and has the potential to unlock its substantial purchasing power. There will also be opportunities for London to develop carbon trading and green purchasing strategies to complement the renewable energy installations.

3.17 In the longer term new technologies, including hydrogen, may increase the potential for London to build its own sources of renewable energy. There is a need to plan and build an infrastructure to facilitate the introduction of, to give two examples, Combined Heat and Power installations and a network of filling stations for clean-fuelled vehicles.[29]

3.18 The Committee urges the Mayor not to miss the opportunity to be bold in setting a renewable energy target. At the Committee's 10 April hearing the view amongst expert witnesses was that a target should be set and that it should be at least at the level of the Government's target of 10% by 2010, a more radical approach than the ETSU report would suggest is achievable.[30] It is worth noting that the ETSU report does not take into account the effect the Mayor's planning powers in the Spatial Development Strategy will have on renewable energy.

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[28] Annex B4 of Volume 2 of the Development of a Renewable Energy Assessment and Targets for London, known as the ETSU report and published by the Mayor, the Government Office for London and the Association of London Government

[29] Written evidence from Woking Borough Council. Combined Heat and Power is a process which uses the steam or hot water which would otherwise be rejected in electricity generation as heating

[30] For the minutes please refer to http://www.london.gov.uk/approot/assembly/2002/assembly_meetings_apr.jsp

3.19 The Mayor proposes to adopt a renewable energy target for London in 2002.[31] It is unclear whether this will be in place before the public consultation draft of the Energy Strategy comes out or if the public consultation draft will be used as a means of setting a target. Presumably whatever target is set will feed into the work on a climate change target for carbon dioxide emissions reduction.

3.20 The Mayor's proposals for technology specific targets are to be welcomed, and will be valuable in identifying the contributions from each technology. The recent ETSU report provides a model for this.

3.21 The potential for energy production from renewable sources within the geographic region of London will always be limited as the main contributing technologies to the national targets such as wind and wave power are largely unavailable in the Capital. The situation is made worse when considering renewable energy as a proportion of electricity or total energy consumption as London is also a high consumer of energy. The ETSU report suggested a target of 1% to 2% electricity supply from renewable sources in London compared with a national target of 10% by 2010.

3.22 Equally important in terms of setting a visionary target for London is the example of other major European cities. Case studies 1 and 2 below look at Munich and Barcelona respectively.

Case study 1: Munich, population of 1.3m

Wholesale purchase of solar-panel kits by Munich government
Munich City Council placed a bulk order for 200 standard solar panel kits in 1995, achieving considerable reductions in unit cost. These were then sold on at cost price to individual residents who were customers of SWM (Munich's electricity utility). Public interest was considerable and further orders were placed. SWM provided comprehensive advice on kit installation and a campaign was launched with Munich's electricians' guild for rapid and professional installation.

Solar Electricity Payment
Unit purchasers of the kits signed a 10-year supply contract with SWM compensating them up to 1 Euro per kW-hour generated.

Solar Share Issue
In 1997 SWM built a 37kWp solar panel on the roof of Pasinger Fabrik (a cultural centre). Customers of SWM were able to purchase shares at around 2,000 Euros, paying roughly 1 Euro per kW-hour generated. Share sold quickly. The price of the share is repaid in 10 years with 3% interest. A second project quickly followed.

These initiatives, and others, meant Munich boasted solar power generation of over 2MW in 1999. In 2000 Munich council set aside 380,000 Euros for solar projects. This has become even more important as the privatisation of SWM sharply reduced subsidies.

[31] Proposal 2, p.72 of the Strategy

Case Study 2: Barcelona, population of 1.5m

In 1994 Barcelona undertook to cut its carbon dioxide emissions to 20% below 1987 figures by 2005. Three initiatives have been key to achieving this ambition:

Solar Thermal Energy, project BARNAMIL
This project reflects Barcelona's commitment to thermal solar energy. It has been calculated, with its abundant sunshine, Barcelona could meet all of its hot water needs through collector coverage of just 3% of its built environment. Intending to install 1,000 sq. metres of solar water heating panels by 2000, more than 1,200 sq. metres had been installed by mid-1999. The Barnamil project was led by the city council, who drew together BARNAGEL (the local energy information unit), a Catalan business association and other interested groups.

Municipal Ordinance
The Barcelona Ordinance was approved by the city government in 1999. This radical document stipulated rules for:

- New and remodelled public and private buildings
- A 60% energy requirement to be met with solar collectors
- Technical specifications for collectors
- High quality design and integration
- Fines for projects infringing these rules up to 60,000 Euros.

Municipal Action Plan
Further measures which together saved 1,700,000 kW-hours per year, e.g.:

- Low-energy lighting
- Benign air-conditioning technologies
- Photovoltaics on university and office buildings
- Energy efficiency measures.

3.23 London should be looking to emulate these and other European cities such as Stockholm, Lille, Dortmund and Freiburg in its commitment to renewable energy.

3.24 A number of factors would allow a greater use of renewable energy to happen. Developments at national and international level, whether in public policy or in technology could play a part. The planning powers given to the Mayor in his Spatial Development Strategy (see section 5 of this report) are another. Written evidence from Solar Century, see Table 1 overleaf, illustrates what could be achieved.

3.25 Using estimates of the likely levels of property development in London up to 2010, the data shows that one form of renewable energy, photovoltaic technology (also known as solar panels), could contribute one half of the renewable energy target on its own. Clearly the figures are based on assumptions as to the take-up levels of solar panels and on gains in energy efficiency which would reduce the demand for electricity, but it does show that the ETSU report figure of between 1% and 2% need not be the final word on the matter.

Table 1: The potential photovoltaic contribution to a 2010 London renewable energy target[32]

Type of building	Assumptions and estimates 2002 – 2010	MWh (000s)
New housing	15,000 new units / year	63
Fitted on to existing housing	5,000 units refit / year	56
New commercial buildings	362 units / year	152
Fitted on to existing commercial	362 units refit / year	152
New public buildings	362 units / year	76
Fitted on to existing public buildings	362 units refit / year	76
Motorway and other industrial	1m sq. metres of photovoltaics	63
Total		**638**
Proportion of London's electricity provided by photovoltaic technology	10% year-on-year reduction in energy use	**5%**

3.26 The proposal that "the Mayor expects Transport for London and the London Development Agency to power their head offices completely from renewable electricity by 2003 and their satellite buildings completely from renewable electricity by 2005" is welcome.[33] However the Strategy fails to show how London could use its economic power on a wider basis to stimulate the market for renewable energy supply.

3.27 Providing guidance to the GLA family on green energy supply again is welcome, although we feel there is an opportunity to issue this more widely to the commercial sector and to include incentives such as links to an environmental standard, such as the proposed Environmental Marque.[34]

3.28 LPC (London Electricity Group's generation arm) is developing a number of renewable energy projects in order to generate more renewable energy to meet the demand in the market. Earlier this year LPC purchased two on-shore wind farms in the northeast of England. It appears that offshore wind offers the best opportunities for achieving major increases in renewable energy capacity. Other projects involving LPC include:

- A proposal to build offshore wind farms at Cromer and Redcar
- Development work on tidal renewable energy technology, for which a prototype is expected later this year.

3.29 These initiatives will help large organisation overcome the difficulties they face in procuring electricity from renewable sources. The Energy Partnership will need to monitor the progress of the utility companies in generating and supplying

[32] Written evidence from Solar Century
[33] Proposal 47, p.131 of the Strategy
[34] Paragraph 6.272, p.131 of the Strategy

electricity from renewable sources. The Partnership should look to set a target for utility companies for supplying such electricity so that London can meet the national target of 10% by 2010.

3.30 There are a number of barriers to renewable energy which the Mayor and the Partnership will need to address:

- Conventional electricity meters are not installed to record energy generated at the point of use. This does not act as an incentive to energy efficiency or renewable energy
- New Electricity Trading Arrangements currently act as a strong disincentive to renewable energy generators. This point was made in the energy report recently produced by the Cabinet Office's Performance and Innovation Unit
- The complicated funding arrangements for renewable energy initiatives (see table 2 overleaf).

3.31 The perception of high costs of solar water heating and photovoltaics was identified as a significant problem during the investigation. Although these technologies have been around for some time, their value in delivering cheap electricity and heating has yet to be realised. Clearly, once demand increases, unit costs will fall.

3.32 In the short-term, then, installation of these technologies should be subsidised in order to stimulate demand. Such subsidies must be distributed according to strategic priorities and the London Energy Partnership will need to play a role.

3.33 The aim must be to create a stable, long-term market without the need for subsidy. The huge variation and uncertainty in fuel prices makes it difficult to predict returns in investment in renewables. This is increasingly becoming a barrier to attracting long-term investment. Although the issues is national, London can play a major part through its potential as a major market for technologies. The Energy Partnership will have a pivotal role here in bringing together Ofgem, the utility companies and investment agencies to achieve attractive but realistic rates of return.

3.34 Investment in innovation, and especially in the environment, is an area where Government, particularly through the Carbon Trust, is focusing. However it is often difficult for small businesses to break into such a competitive arena. The process of tendering is often too costly for them to participate and effectively debars any meaningful entry into the market. In addition, Government and local authority procurement rules often make innovation difficult. This catch 22 situation must be addressed.

3.35 Funding is certainly an issue for the Energy Partnership. It will have to work with the many partnership and funding agencies listed overleaf in Table 2 to develop a clear coherent action plan for London.

3.36 The availability of the appropriate skills is of great concern. The Solar City programme, along with the North West London College are to be praised for their work in development training programmes for trade professionals in this field. The Energy Partnership should support such programmes and the further roll out of training modules.

3.37 The development of appropriate standards is key if consumers are to have confidence in this market. Solar Cities have started this programme, but organisations such as the National House Builders Council are crucial to establishing it in the mainstream.

Table 2: Funding for renewable energy projects

<u>European Commission</u>

EC 5th Framework Project (Energie)
The EC programme in the field of energy, environment and sustainable development supports research, technological development and dissemination activities in six key action areas, as well as activities of a generic nature and research infrastructures. Key actions funded include cleaner energy systems including renewables.

EC LIFE apply via DEFRA
Supports development and implementation of EC environment policy

EC: ALTENER
The Altener programme supports provision of renewable energy sources and implementation of a community strategy and action plan for renewable energy sources to the year 2010.

EC Environmental Education and Training - support is available from the European Commission to help promote environmental education and training, as a tool for achieving environmental objectives.

EC European Social Fund
Contributes to the running costs of vocational training, guidance and counselling, job creation measures and projects to stimulate employment in particular regions

<u>National schemes</u>

Environmental Action Fund
Helps voluntary organisations in England with work which advances the Governments' environmental policies. Supports work which is ineligible for grant from other sources.

New Opportunities Fund
Offers support to sustainable projects that will complement relevant local and national strategies and programmes. One of the Green Spaces and Sustainable Communities Initiative main strands is small sustainable community based projects that contribute to sustainable development in social, economic and environmental terms

The Carbon Trust
Enhanced capital allowance scheme
The Foundation Programme aims to support low carbon focused research and development in the UK, through:

- accelerating the research and development already underway
- encouraging additional research and development

Energy Saving Trust
Several schemes: Community Energy, Carbon Reduction Pilot Initiative, DTI grants.

DTI
Major PV demonstration programme - Solar grant programme administered by the EST

ECSRC

<u>Localised</u>

Local Authorities

SRB support regeneration initiatives including environmental projects

Utilities

Bridge House Estates Trust Fund

Combined Heat and Power and community heating

3.38 Combined Heat and Power is an efficient means of generating both electricity and heat and is one of the technologies which can make London a more energy efficient city. Given that approximately 70% of energy consumed in London is through heating, efficient heating schemes will be much sought after in the drive to reduce carbon dioxide emission. Case study 3 below provides details of one such scheme.

Case study 3: Barkantine Combined Heat and Power plant

The Combined Heat and Power plant on the Barkantine Estate, Isle of Dogs in Tower Hamlets began its operation in February 2001. The scheme serves 540 dwellings which will increase to 700 in 2006 and has the capacity to serve 1,000 homes. It also heats the local swimming pool and primary school.

It is estimated that it saves residents on average £90 per year as well as reducing carbon dioxide emissions by generating electricity and converting the waste heat into useable energy for space heating, water heating and cooling. Typical efficiency is 80% to 90% compared with 35% for a conventional power station.

3.39 The polices and proposals for Combined Heat and Power and community heating are:

- The Mayor considers that London should maximise its contribution to meeting the national target for combined heat and power, doubling the 2000 capacity by 2010[35]
- The Mayor supports the development and application of micro Combined Heat and Power as a means of providing low cost, efficient and clean heat and electricity for homes in London, and strongly encourages pilot studies of the technology to be carried out in the capital[36]
- Through the Spatial Development Strategy, statutory consultations and planning referrals, the Mayor will work to ensure that, as far as possible, development is exemplary and demonstrates the highest standards of sustainability to deliver the objectives of the Energy Strategy. The Mayor encourages Boroughs to do the same.[37]

3.40 London has great potential for residential Combined Heat and Power due to the density of its housing. Combined Heat and Power could make a significant contribution to meeting targets for reducing emissions of carbon dioxide and addressing the issue of fuel poverty. The Strategy needs to include an action plan with targets detailing how Combined Heat and Power capacity in London will be increased.

3.41 The Strategy provides no framework for the large-scale implementation of Combined Heat and Power. As Boroughs will be the key delivery agents, more detail is required on how the Mayor will work with them and the role of the London Energy Partnership in facilitating this process. Borough planners will play a key role in the implementation of Combined Heat and Power, yet there is no mention of guidance or training to be provided to them.

[35] Policy 7, p.75 of the Strategy
[36] Policy 8, p.78 of the Strategy
[37] Policy 12, p.87 of the Strategy

3.42 The Mayor considers that London should maximise its contribution to the UK target of doubling the levels of Combined Heat and Power capacity which was in existence in 2000 by 2010.[38]

3.43 Again the wording contained in the Strategy is non-specific. The Strategy does not set a target figure but rather recommends that London should do as much as it can.

3.44 Future drafts of the Strategy should quantify what sort of target can be set. The current draft of the Strategy begins to do this by illustrating how a doubling of Combined Heat and Power capacity could be achieved sector by sector.[39] It is, however, a conservative estimate.

3.45 London has the potential to develop a comprehensive heat distribution network in its centre, as over one quarter (27%) of the national potential for additional heat supply is in London.[40]

3.46 The Mayor could set both short-term and long-term targets for community heating and Combined Heat and Power in London.[41] Short-term targets would be based on upgrading existing community heating systems and suitable commercial sites, whereas longer term planning would look at the potential for a comprehensive heat distribution network.

[38] Policy 7, p.75 of the Strategy
[39] Table 8, p.75 of the Strategy
[40] Paragraphs 5.62 and 5.63, p.76 of the Strategy
[41] It is worth noting that Combined Heat and Power is also a key measure for reducing fuel poverty and providing affordable warmth

Recommendations on renewable energy

Recommendation 10

The Mayor should consider the issue of sustainable energy supply in London in greater depth in the Strategy, along with how London's purchasing and investment potential London can be used.

Recommendation 11

The Mayor's should develop into a proposal his intention to examine European experience with regard to renewable energy supply.

Recommendation 12

The Mayor should work with utilities and London energy managers to develop a plan with targets for the implementation of sustainable energy supply in London.

Recommendation 13

The Mayor should include short, medium and long term scenarios for the use of conventional and renewable energy sources in London in the Strategy.

Recommendation 14

The Mayor should challenge Ofgem to remove the barriers to renewable energy imposed by the existing energy supply infrastructure.

Recommendation 15

The Mayor should highlight in the Strategy that London has the largest potential for residential Combined Heat and Power in the UK.

Recommendation 16

The Mayor should set a clear framework and targets for the large-scale implementation of Combined Heat and Power in London through the SDS and supplementary planning guidance.

Recommendation 17

The Mayor should set a target for renewable energy at a level of at least that of the Government's target of 10% by 2010.

Recommendation 18

The Mayor should support, through the Energy Partnership, the development in renewable energy training and skills required to meet future demand.

4 The hydrogen infrastructure

4.1 Developing a hydrogen infrastructure for London's transport will be a major step forward in reducing harmful emissions and creating a sustainable approach to energy management.[42]

4.2 Policies and proposals on the hydrogen infrastructure include:

- The Mayor will support the development of hydrogen and fuel cell technologies in London as a means of providing low and zero emission energy.[43]
- Through the London Hydrogen Partnership, the Mayor will seek government support for the development of hydrogen and fuel cells in the UK and will aim for its work in London to facilitate the uptake of these technologies across the rest of the UK.[44]
- The Mayor will initiate a hydrogen partnership in London involving those working in the industry and others who need to be involved in delivering a hydrogen economy. The partnership will be launched in early 2002 and will work together to develop and implement a hydrogen action plan.[45]

4.3 Over the next 50 years hydrogen will play an increasingly important role in the implementation of a sustainable energy strategy for the UK as a whole and for London. Its first impact is likely to be in the field of transport – low emission fuel cell buses powered by hydrogen could be in use as early as 2020. While there are differences in opinion on how the hydrogen economy and the surrounding infrastructure will develop, stakeholders made a number of proposals for moving this forward:

- Targets for market penetration
- A 'road map' detailing key milestones and the implications of other policy initiatives such as the 20% target for electricity generation from renewable sources by 2020
- An assessment of the skills required in the new hydrogen economy
- Proposals on how Transport for London could use its purchasing power to facilitate the implementation of the new technology
- An acknowledgement by the Government of the importance and economic benefits of leading Europe in the development of a hydrogen economy
- A Department of Trade and Industry demonstration project to illustrate how the new technology can work
- Regulation and policies in support of the hydrogen economy from central, regional and local government, to be reflected in the Mayor's Spatial Development, Noise, Energy and Transport Strategies
- An analysis of the lessons learned from the California Fuel Cells Partnership. [46]

[42] The hydrogen infrastructure is the framework required to support the introduction of a new fuel cell technology – a sustainable form of energy produced from hydrogen and capable of powering vehicles
[43] Policy 9, p.81 of the Strategy
[44] Proposal 83, p.160 of the Strategy
[45] Proposal 75, p.157 of the Strategy
[46] London Assembly Hydrogen Infrastructure Seminar 13 May 2002

4.4 The Committee supports the London Hydrogen Partnership's Steering Group. Numbers should be minimal - the equivalent group in the US Congress has only 8 members. Each member should represent a key part in the process whether that be manufacturing, training or implementation.

4.5 Woking Borough Council's written evidence to the Committee stresses that there is a real and practical opportunity for London to prepare the way for a hydrogen economy through the installation of Combined Heat and Power systems. There are two main components to CHP systems: the plant for generating heat and electricity and the pipe-work and wiring network for distributing the heat and electricity. Given that the infrastructure for distributing the heat and power is not dependent on the fuel used to power the plant, gas fired Combined Heat and Power systems installed now can be replaced by hydrogen powered Combined Heat and Power plant in 15 or so years time.

4.6 Transport for London (TfL) as a key purchaser in London would be instrumental in supporting demand with the developments from the air quality, noise and energy strategies. TfL has a clear imperative to support work in developing the hydrogen technology and should set procurement targets for hydrogen buses, pending the outcome of the workings of the Hydrogen Partnership.

4.7 Skills are crucial in this area. The Committee applauds the work of North West London College in developing a curriculum which will be able to provide the appropriate level of training for the new energy technologies.

Recommendations on the hydrogen infrastructure

Recommendation 19

The Mayor should set targets and propose an implementation plan for the development of hydrogen and fuel cell technologies in London.

Recommendation 20

The Mayor should develop the Strategy to include a proposal for pilot projects in the use of hydrogen in London.

Recommendation 21

The Mayor should make clear how he expects the London Hydrogen Partnership and the London Energy Partnership to work with one another.

5 The role of planning

5.1 Through his statutory responsibility for strategic planning in the capital, the Mayor has a significant lever for changing energy practice in London. Implementation will be through:

- The London Plan, also known as the Spatial Development Strategy
- The Mayor's role in decisions on major planning applications
- Representing the interests of Londoners in relation to other planning matters.[47]

5.2 The key policy statement covering the Mayor's planning role in the Energy Strategy is that "through the Spatial Development Strategy, statutory consultations and planning referrals, the Mayor will work to ensure that, as far as possible, development is exemplary and demonstrates the highest standards of sustainability to deliver the objectives of the Energy Strategy. The Mayor encourages the boroughs to do the same".[48]

5.3 The Mayor's draft London Plan was published on 21 June 2002 towards the end of the Committee's scrutiny of the Strategy.[49] The Committee was heartened to see that the Plan provides strong support for a sustainable approach to energy management. There are four policies areas which cover:

- Energy efficiency and renewable energy, saying that the Mayor will (and ask Boroughs to) support the Energy Strategy by reducing car use and expecting energy efficiency and renewable energy measures to be included in development proposals submitted to Boroughs[50]
- Energy assessment of proposed major developments, saying that the Mayor will (and ask Boroughs to) assess the energy demand of proposed major developments and expecting developers to consider renewable energy and Combined Heat and Power before other forms of heating systems[51]
- Providing for renewable energy, saying that the Mayor will (and ask Boroughs to) expect developments to generate a proportion of the site's electricity or heat needs from renewable energy sources, where feasible[52]
- Supporting renewable energy, saying that the Mayor will (and ask Boroughs to) identify suitable sites for wind turbines and solar technologies.[53]

5.4 The planning proposals in the Energy Strategy focus on the Mayor's direct planning powers through the London Plan and the requirement for Boroughs to refer applications of strategic importance to him. Whilst this is to be welcomed, it would be useful to have an indication of the likely impact of these actions on the targets being developed for the Strategy, for example:

- What proportion of the new developments referred to the Mayor for approval are likely to be in a position to make use of renewable energy technologies?

[47] Paragraph 6.3, p.84 of the Strategy
[48] Policy 12, p.87 of the Strategy
[49] The Mayor of London, the draft London Plan, the Draft Spatial Development Strategy for Greater London, June 2002
[50] Policy 4A.7, p.233 of the draft London Plan
[51] Policy 4A.8, p.234 of the draft London Plan
[52] Policy 4A.9, p.235 of the draft London Plan
[53] Policy 4A.10, p.235 of the draft London Plan

- What effect will asking the Boroughs to promote renewable energy have?

5.5 It is likely that the real impact in terms of planning initiatives will be through the Boroughs' Unitary Development Plans which have to conform with the London Plan. In this respect the draft London Plan, which will of course form the basis for the London Plan itself, is welcome. As demonstrated above the Mayor has asked Boroughs to follow his good practice in all energy matters. The Committee would like to see the London Plan go slightly further and ask that Borough Unitary Development Plans also include targets for renewable energy use.

5.6 The Mayor's proposed Supplementary Planning Guidance on sustainable design and construction is also warmly welcomed, as is the commitment to it being published by the end of 2002. We also support the Mayor in urging the Government to review how planning guidance relates to energy use and to strengthen the consideration of energy and carbon dioxide in planning law.[54]

5.7 Publication of guidance is laudable, but crucial is the interpretation placed on that guidance by policy makers and those charged with implementing it in Boroughs. Existing guidance has led to an enormous variance in the Unitary Development Plans produced by London Boroughs, as evidenced by the analysis contained in the ETSU report. In this exercise, one third of Borough Unitary Development Plans were deemed to be poor in the context of renewable energy and none was classed as excellent.[55]

5.8 As yet there are no proposals to develop citywide planning for key technologies. Witnesses urged that there should be a solar plan for London.[56] There is a need for a framework through which these and other technologies can be prominent in Boroughs' Unitary Development Plans.

5.9 The Supplementary Planning Guidance should make a difference, but it is difficult to comment directly on its scope and content as the consultation exercise on the Guidance has yet to happen. When consultation does occur on the Guidance, we look to the Mayor to make it as extensive as possible.

5.10 The importance of information, guidance and training is clear as, unlike other, smaller cities in the UK, London does not have a single tier of local government. The challenge therefore will be to bring the worst performing authorities up to the standard of the best. Even with no further guidance at either national or regional level, there is still an opportunity to do more to promote sustainable energy use in the drafting and implementation by Boroughs of existing Unitary Development Plans.

5.11 Training is seen as a priority by many of those who have contributed to our scrutiny. Training can overcome the perception that planning has to be a barrier to renewable energy. Boroughs will need to take an integrated approach and make connections between the energy, planning and regeneration services they provide.[57]

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[54] Proposal 78, p.159 of the Strategy and Proposal 77 on pages 158 and 159 of the Strategy
[55] Paragraphs 6.9 and 6.10, p.85 of the Strategy
[56] London Assembly renewable energy and planning seminar 20 May 2002 and Greater London Energy Efficiency Network workshops with Boroughs 2002
[57] London Assembly renewable energy and planning seminar 20 May 2002 and written evidence from Woking Borough Council

5.12 There was also a call for the Mayor to set up some form of support for Boroughs such as Merton which are looking to promote renewable energy through their Unitary Development Plans.[58] This could be through the citywide planning guidance referred to above as well as promoting good practice on an on-going basis.

5.13 Opportunities also exist for the Mayor to give guidance on installations in conservation areas and to circulate case studies for different solar technologies.[59]

5.14 The Mayor has underplayed his hand with regards to incorporating sustainability principles into building regulations. The Mayor should use the publication of his Supplementary Planning Guidance to lobby for a change in legislation.

[58] London Assembly renewable energy and planning seminar 20 May 2002
[59] London Assembly renewable energy and planning seminar 20 May 2002

Recommendations on planning

Recommendation 22

The Mayor should develop the proposals in the London Plan so that Boroughs are asked to include renewable energy targets in their Unitary Development Plans.

Recommendation 23

The Mayor should ensure that the public consultation draft of the Energy Strategy includes proposals for citywide planning for key technologies such as solar, combined heat and power and a heat distribution network.

Recommendation 24

The Mayor should consult widely on his proposed Supplementary Planning Guidance on sustainable design and construction.

Recommendation 25

The Mayor should promote good practice in the drafting and implementation of the energy aspects of Unitary Development Plans.

Recommendation 26

The Mayor should seek to raise the awareness of planning officers of the importance of sustainable energy solutions.

Recommendation 27

The Mayor should lobby for a change in the building regulations which would enable sustainability to be incorporated into the regulations

6 The London Energy Partnership

6.1 Partnership working will be key to achieve the aims of the Strategy. The Committee welcomes the Mayor's proposal for a London Energy Partnership and plans to take an active role in monitoring its establishment and future performance. This section looks at how the Partnership should function, its role in setting targets and the possibility of it trading in greenhouse gas emissions to combat climate change.

How the Partnership should function

6.2 The Strategy proposes that the Mayor should take the lead in setting up a London Energy Partnership (the Partnership). The Partnership will be key to delivering much of what is in the Strategy for two main reasons:

- as the Mayor informed the Committee, he is responsible for only 1.5% of the gross domestic product (GDP) of London, whereas by contrast his counterpart in Moscow controls 50% of that city's GDP.[60] This means that in a field such as energy with many different stakeholders, including some major commercial organisations, partnership working is the principal mechanism for achieving environmental aims
- the Strategy is not statutory and therefore, in the absence of mayoral powers, partnership working will be essential to achieving the action plan and targets contained in the final agreed version of the Strategy.[61]

6.3 The Strategy states that the Mayor will work with a wide range of organisations to enhance the work of existing networks and to support organisations at a local level.[62]

6.4 The Mayor will initiate the Partnership as a focus for delivery and a London Energy Forum (the Forum) will advise on priority issues.[63] The Partnership will be made up from leaders in the energy field and will set up working groups to deliver different parts of the Strategy. The Forum will include practitioners and will meet a couple of times each year to advise the Partnership.

6.5 The Committee is concerned that the structure and identity of the Partnership is not yet clear. We are keen to see the proposals developed so that in the next draft - the public consultation draft - of the Strategy, greater detail is included as to how the Partnership will function. This will enable stakeholders to contribute their views at an early stage of the process and before the Strategy is agreed in its final form.

6.6 Table 2 overleaf gives examples of existing London energy networks. The Partnership must seek to build on what is already being done and not duplicate or override current good work and practice.

[60] London Assembly's Environment Committee 13 June 2002
[61] The Energy Strategy is not statutory as it is not one of the Strategies required by the GLA Act 1999
[62] Policy 25, p.141 of the Strategy and Policy 26, p.143 of the Strategy
[63] Proposals 56 and 57, p.142 of the Strategy

Table 2: Current London energy networks

1. London HECA Forum
Regular meetings of local officers responsible for implementing the Home Energy Conservation Act (HECA) within their boroughs. Exchange of information and experience, discussion of issues relating to HECA.

2. London Boroughs Energy Managers Group (LBEMG)
Regular meeting of local authority officers and others (e.g. LFEPA, Metropolitan Police, Imperial College, Energy Consultants) responsible for energy management in public buildings. Arrange visits to sites of interest, e.g. Citigen, BedZed, etc.

3. London Utilities Consortium
Consortium of London Boroughs who have combined their purchasing power to obtain energy services.

4. Central London Energy Managers Group (CLEMG)
Network of energy managers from central London local authorities and large commercial organisations.

5. Local Agenda 21 Co-ordinators Forum
Network of LA21 co-ordinators

6. GLEEN (Greater London Energy Efficiency Network)
Current activities include:

- Development and management of a regional on-line database and information exchange network for London, including information on energy data, case studies, organisations and contacts, important documents, resources, etc
- Facilitation of a consultation process with the London local authorities to provide a consensus response from all the London boroughs to the Mayor's Energy Strategy. In partnership with the London HECA Forum and the LBEMG
- Management of financial incentive schemes to encourage the installation of condensing boilers in East London (in partnership with five local authorities)
- A combined grant and loan scheme for energy efficiency measures in the private rented sector (in partnership with 15 local authorities)
- Development of a private sector revolving loan fund to help Londoners invest in energy efficiency measures
- One-Stop-Surveyor pilot scheme in East London
- Creation and management of a network of energy efficiency installers, across London
- Subsidiary company, HelpCo, is a not-for-profit energy services company for London.

7. National Energy Action Fuel Poverty Forum
Quarterly meetings to discuss fuel poverty issues in London.

8. London and South-East Region Energy Efficiency Advice Centres
Quarterly meetings of the EEACs which serve London and the Home Counties. EEACs are funded by the Energy Saving Trust and other local sponsors to provide free and impartial energy efficiency advice to householders and small businesses within their catchment area.

9. Solar Cities
A proposal that is being mooted is the Solar City Programme. This hopes to bring together partners in industry, research and Regional and Local Government, who are working on renewable energy in London.

A Solar City programme is being promoted under the auspices of the International Energy Agency. The principal aim is to ensure that our cities realise a necessary and fundamental shift away from fossil fuel dependency. Further information can be sought from the Solar City website: www.solarcity.org.

6.7 The Partnership should be the means of ensuring widespread support for the Strategy's action plan and targets. This will necessarily involve a large number of organisations and to go beyond simple statements of agreement. Commitment to the Strategy by stakeholders will need to be demonstrated by action, particularly through active participation in the Partnership and a willingness to implement its proposals.

6.7 The Partnership should be based around a number of working groups. These can be formed or disbanded at any time as needs arise or wane. We would suggest the following groups as a starting point:

- Energy efficiency and fuel poverty
- Renewable energy and planning
- Renewable energy and manufacturing, skills and training
- Community groups link
- Business link
- Education and information
- Funding and grants.[64]

6.8 All interested organisations would be invited to attend working group meetings, although membership may have to be limited through negotiation to aid efficient decision-making.

6.9 There could be one more working group, holding a cross-sectoral brief and developing projects and partnerships of benefit to several or all of the working groups. This additional group would also oversee the development of a communications strategy and plan, which are vital to establishing a good working relationship with existing London energy networks.

6.10 We suggest that each working group elects a small number of its members, possibly one or two, onto a steering group. The steering group would also include other members drawn from the Greater London Authority, the Hydrogen Partnership, and the Solar Cities programme.[65]

6.11 There would need to be a properly resourced secretariat working to the Partnership's clearly stated aims and objectives.

6.12 Over time the Partnership would develop an identity and could provide services to the London energy community. These could include:

- Provision of technical information
- Good practice publications
- London wide promotion campaigns
- Assistance with funding from UK and European programmes.

[64] The London Assembly held seminars in May 2002 on community groups and energy efficiency, renewable energy and planning and renewable energy and skills. The seminars were well received by participants and gave grounds to suggest that these sort of topics would fit well as themes for working groups of the Partnership. Further detail is provided in Sections 3, 4 and 5 and Annex B of this report.

[65] The Hydrogen Partnership is discussed in Section 6 of this report

6.13 The extensive funding available from Government, the utility companies, the Carbon Trust and other bodies should be strategically deployed through the Energy Partnership.

Setting targets

6.14 The Mayor states his vision for energy in London as "to develop London as an exemplary world class city for sustainable energy and enhance social, environmental and economic improvement".[66] This vision sets the framework for the Strategy.

6.15 The objectives laid out in the strategy to achieve this aim can be summarised as:

- To reduce carbon dioxide emissions
- To eradicate fuel poverty
- To increase job opportunities and innovation in delivering sustainable energy.[67]

6.16 The key policies and proposals relating to targets are that London should be proactive in meeting or exceeding the UK targets for:

- carbon dioxide emissions reduction
- renewable energy
- combined heat and power
- fuel poverty.[68]

6.17 In the Committee's view targets and a clear framework for implementing them help provide reassurance and stability, which are required to attract investment from the private sector.

6.18 The proposal and policies in the Strategy relating to targets, however, do not explicitly set targets. In this respect the Mayor is failing to give the clear direction and lead expected of him.

6.19 Stakeholders broadly agree that the Mayor should set targets for London and that they should be clear and unambiguous. There is some divergence on the approach to be taken in setting targets, whether caution should be the watchword or whether a more radical outlook should be favoured.

6.20 The Committee's own preference is for challenging targets. However, what is disappointing is that the Strategy is not the type of targets favoured but the failure to set targets and, going hand in hand with that, a missed opportunity in terms of moving the energy debate forward in London. Stakeholders will find it very difficult to engage in consultative exercises around the Strategy if they have no yardstick on which to base their comments.

6.21 Although targets do need to be realistic, more visionary targets are appropriate for a city seeking to be world class.[69] If targets are set too low, their achievement

[66] Paragraph 4.1, p.51 of the Strategy
[67] Paragraph 4.2, pages 51 and 52 of the Strategy
[68] Policy 1, p.66 of the Strategy

will not result in the world city status the Mayor aspires to. When targets are set, they will need to reflect this aim and therefore be based on comparisons with other cities recognised as leaders in this field.

6.22 There should be short, medium and long-term targets. The year 2010 is important because it corresponds with national targets, but focusing on activities which deliver by that date may well obscure activities which will yield longer-term benefits. This is particularly pertinent in the renewable energy field and written evidence we have received from Woking Borough Council, Solar Century and the Building Research Establishment lends support to this viewpoint.

6.23 London-wide targets for a non-statutory Strategy by their very nature cannot have one body responsible for their delivery. Therefore each target should be broken down into its component parts and with a body or agent taking the lead for delivering it. Two good examples of this approach are to be found in the UK Climate Change Strategy and the recent ETSU report on a renewable energy target for London.[70] The target should be set first in order to deliver the UK's Kyoto commitment. This will then support the political will and encourage business/partners to deliver.

6.24 The UK Climate Change Programme sets a UK target of a 20% reduction in carbon dioxide emissions by 2010. The Mayor's Energy Strategy does not go beyond saying that London will play its part in delivering its share of the target.[71]

6.25 Other influential reports set much more challenging targets if climate change is to be tackled effectively. The Royal Commission on Environmental Pollution has set out the case for limiting concentrations of atmospheric carbon dioxide to a level which could imply a reduction of up to 60% on current carbon dioxide emissions levels by 2050 and of up to 80% by 2100.[72] These figures should form part of any consideration of a target for reducing carbon dioxide emissions.

6.26 Analysis of each of the following areas should contribute to setting a challenging target:

- Domestic: the draft London Plan forecasts a high density of housing, resulting in a disproportionate share of domestic energy consumption. The capital consumes approximately 8% of the UK's total energy, but consumes 14% of the UK's domestic energy
- Commercial: London has the most important commercial sector in Europe. Not only could targets be set for energy management but also for activities such as carbon trading, the climate change levy and green purchasing
- Community heating and Combined Heat and Power: London has the greatest potential for domestic Combined Heat and Power in the UK due to it being a densely populated city

[69] The notion of a world city is an attempt to distinguish truly international and outstanding cities for business and culture such as London, New York, Paris, Tokyo and possibly Moscow from other cities
[70] UK Climate Change Strategy, table on p.10 of the Summary and pages 3 and 4 of Volume 1 of the December 2001 report Development of a Renewable Energy Assessment and Targets for London published by the Mayor, the Government Office for London and Association of London Government – the report is named after the consultants (ETSU, now known as Future Energy Solutions) engaged to write it
[71] Proposal 1, p.67 of the Strategy
[72] The Royal Commission on Environmental Pollution's report Energy – the Changing Climate

- Local sources of renewable energy: office and residential solar applications, and the potential for bulk purchasing to transform the market for renewable energy technologies, will have an impact on carbon dioxide emissions
- Hydrogen: the introduction of a hydrogen infrastructure in London will need to be factored into the target.

6.27 At the Committee's hearing on 23 May it became apparent that the Mayor's two environmental advisers Victor Anderson and John Duffy hold divergent views on whether a target for carbon dioxide emissions reduction should be contained in the Strategy.[73] The compromise position adopted by the Mayor is to ask the London Sustainable Development Commission to work with stakeholders to set a carbon dioxide emissions reduction target for London.[74]

6.28 The Committee believes that the Draft Energy Strategy must set the target for London. The Assembly draft is an opportunity missed. The Sustainable Development Commission should consult widely on the achievability of the national targets in London.

Trading in greenhouse gas emissions

6.29 The Strategy proposes that "the Mayor encourages the London Stock Exchange to investigate the potential for developing the City of London as an international greenhouse gas emissions trading centre".[75]

6.30 The idea that the City of London should play more of a role in reducing greenhouse gas emissions through trading is a good one.[76] Our concern is that the proposal does no go far enough if it's seeking to bring about the desired goal of reduced carbon dioxide emissions through increased trading. By placing the onus on the London Stock Exchange, it also underplays the part the Mayor and the London Energy Partnership can play in persuading key commercial stakeholders and others to participate in greenhouse gas emissions trading.

[73] For the minutes please refer to http://www.london.gov.uk/approot/assembly/2002/assembly_meetings_may.jsp
[74] Summary, p.xii of the Strategy
[75] Proposal 71, p.154 of the Strategy
[76] As part of the 1997 Kyoto Protocol, countries which have achieved reductions in carbon dioxide emission over and above those required by the Protocol can sell the excess to countries which are struggling to meet their target. Additionally, as part of the UK Climate Change Programme, the UK Emissions Trading Scheme has been set up to allow UK organisations which control their own carbon dioxide emissions to trade in carbon dioxide emissions allowances

Recommendations on the Partnership

Recommendation 28

The Mayor should ensure that his proposals for a London Energy Partnership are developed in the public consultation draft of the Strategy so that stakeholders can comment on specific details. The proposals should include:

- clearly defined aims and objectives
- the envisaged structure
- key issues to be addressed by the working groups
- how the working groups relate to existing London energy networks
- sources of funding for the Partnership
- timescale for the Partnership to become operational.

Recommendation 29

The Mayor should be pro-active in working with others to lobby for more London Stock Exchange trading in greenhouse gas emissions.

Recommendation 30

The Mayor should set a framework for the London Sustainable Development Commission so that it sets a target of at least that of the national level for carbon dioxide emission reductions.

Annex A: Recommendations

The Mayor should:

1. Set the London Energy Partnership the task of developing a fuel poverty strategy for London

2. Encourage utility companies to invest in smart metering as a means of reducing energy bills for those in poverty

3. Support Warm Zones by commissioning research into the most efficient and effective way they can operate

4. Define fuel poverty in the Strategy as a household spending more than 10% of its disposable income on fuel

5. Set a more ambitious target for improving the SAP rating of homes of the fuel poor. The suggested target of a SAP rating of 30 by 2010 is insufficient and should be at least 60.

6. Incorporate into his fuel poverty target a measure of fuel price in addition to the energy efficiency of the home

7. Dedicate a section of the Strategy to energy conservation and place it at the top of the energy hierarchy

8. Work with others to establish a single database recording the energy efficiency data for all London homes

9. Ensure that maximum value is gained from the work of London's five energy efficiency advice centres by integrating funding streams for energy efficiency initiatives in London

10. Consider the issue of sustainable energy supply in London in greater depth in the Strategy, along with how London's purchasing and investment potential London can be used

11. Develop into a proposal his intention to examine European experience with regard to renewable energy supply

12. Work with utilities and London energy managers to develop a plan with targets for the implementation of sustainable energy supply in London

13. Include short, medium and long term scenarios for the use of conventional and renewable energy sources in London in the Strategy

14. Challenge Ofgem to remove the barriers to renewable energy imposed by the existing energy supply infrastructure

15. Highlight in the Strategy that London has the largest potential for residential Combined Heat and Power in the UK

16. Set a clear framework and targets for the large-scale implementation of Combined Heat and Power in London through the SDS and supplementary planning guidance

17. Set a target for renewable energy at a level of at least that of the Government's target of 10% by 2010

18. Support, through the Energy Partnership, the development in renewable energy training and skills required to meet future demand

19. Set targets and propose an implementation plan for the development of hydrogen and fuel cell technologies in London

20. Develop the Strategy to include a proposal for pilot projects in the use of hydrogen in London

21. Make clear how he expects the London Hydrogen Partnership and the London Energy Partnership to work with one another

22. Develop the proposals in the London Plan so that Boroughs are asked to include renewable energy targets in their Unitary Development Plans

23. Ensure that the public consultation draft of the Energy Strategy includes proposals for citywide planning for key technologies such as solar, combined heat and power and a heat distribution network

24. Consult widely on his proposed Supplementary Planning Guidance on sustainable design and construction

25. Promote good practice in the drafting and implementation of the energy aspects of Unitary Development Plans

26. Seek to raise the awareness of planning officers of the importance of sustainable energy solutions

27. Lobby for a change in the building regulations which would enable sustainability to be incorporated into the regulations

28. Ensure that his proposals for a London Energy Partnership are developed in the public consultation draft of the Strategy so that stakeholders can comment on specific details. The proposals should include:

- clearly defined aims and objectives
- the envisaged structure
- key issues to be addressed by the working groups
- how the working groups relate to existing London energy networks
- sources of funding for the Partnership
- timescale for the Partnership to become operational.

29. Be pro-active in working with others to lobby for more London Stock Exchange trading in greenhouse gas emissions

30. Set a framework for the London Sustainable Development Commission so that it sets a target of at least that of the national level for carbon dioxide emission reductions

Annex B: House of Commons' Environmental Audit Committee report on renewable energy

What is the problem?

With the decommissioning of nuclear power stations and of older coal and gas plant, it has been estimated that some 60 per cent of current generation capacity will need to be replaced in the next 25 years. Current energy policy is therefore at a historical turning point. Decisions made now will influence developments over the next half century.

There is little doubt that the UK, along with other developed nations, is likely to face far greater emission reduction targets for greenhouse gases after the current commitment period under the Kyoto agreement expires in 2012.

What contribution can renewables make?

The UK's theoretical potential for generating renewable energy is well in excess of its entire electricity consumption.

The overall EU target set out in the 2001 Renewables Directive is far more demanding than the UK indicative target —22 per cent by 2010 as against 10 per cent for the UK— reflecting the fact that many other EU countries are considerably more advanced than the UK in terms of the percentage of renewable energy generated.

Given the priority accorded to the promotion of renewables, we find it extraordinary that the DTI has not carried out a more recent and thorough analysis of economic and cost potentials. We recommend that it should do so as a matter of urgency, and subsequently update it on a regular basis.

The costs to the consumer of meeting renewables targets is relatively limited. Moreover, the cost of meeting a long-term 60 per cent carbon reduction target by 2050 is likely to be only 0.02 per cent of GDP per annum. This is equivalent to a reduction of 1 per cent in GDP over half a century—a very small price to pay for the environmental benefits it would bring.

While it is very difficult to forecast future price movements, there seems widespread agreement at present that UK energy prices are currently at an unsustainably low level. Increases in the costs of non-renewable generation appear likely, making renewable energy increasingly competitive.

We therefore see renewables, together with the need for radical improvements in energy efficiency, as being the primary tool to fulfil the UK's climate change commitments. The Government must provide commitment and leadership here, and should not allow itself to drift into a position in which nuclear appears to be the only alternative—as a result of a failure to maximise the potential which renewables have to offer.

Achieving the targets

It is already certain that we shall miss the 2003 target— probably by as much as 2 per cent—as the Energy Minister confirmed in his evidence to us. On the present rate of progress we will achieve only just over 5 per cent against the 2010 target of 10 per cent.

Achieving the 10.4 per cent Renewable Obligation target by 2010 represents an even greater challenge. Eligible generation, which has only increased from 0.3 per cent to 1.5 per cent over the last 10 years, would need to increase from 1.5 per cent to 10.4 per cent in 8 years.

What are the barriers to progress?

Planning

Obtaining planning permission remains a major obstacle to increased deployment of renewables.

It seems clear to us that the scale of opposition from the MoD to wind farm developments is such that it may seriously jeopardise the achievement of the Government's targets for renewables and the promotion of wind power. We urge the Government to set out publicly how it proposes to resolve this conflict.

We are concerned about the lack of a consistent basis for the DTI's regional renewable energy assessments, and the resulting anomalies in the results. We are puzzled as to how the DTI are intending to take forward its work in setting regional targets and would urge the department to clarify its plans.

If the DTI's regional renewable energy assessments are intended to influence planning, then they need to be incorporated in regional plans and Regional Development Agencies need to be held to targets. We also consider that the Office of the Deputy Prime Minister need to incorporate in new guidance a presumption in favour of renewables.

NETA and the Renewables Obligation

The failure to carry out a thorough environmental appraisal of the proposals at the very start of the process was a material factor in the Government's failure to achieve its environmental objectives for the New Electricity Trading Arrangements. It also dramatically exemplifies the effect of the failure to incorporate the promotion of sustainable development as one of Ofgem's key objectives.

It is practically inconceivable that a transition to an environmentally benign energy system could be achieved on the basis of 'cheap' energy, as the Prime Minister's Foreword to the Performance and Innovation Unit report indicates is a priority.

In view of the fact that electricity sector emissions are rising rather than falling, in direct contradiction to the DTI predictions, there is an urgent need to examine the environmental impact of The New Electricity Trading Arrangement and recent market changes. We are concerned that the DTI and Ofgem appear to have done nothing in this respect; and that DEFRA are not planning to carry out a formal review of emissions until 2005, while their interim 2003 review will be too late for it to influence the White Paper.

We hope the Renewables Obligation will be successful, but are concerned that it represents a rather indirect policy mechanism when compared to the very direct incentives which 'feed-in' instruments, such as those which have been used in Germany and Denmark, provide.

The amounts of funding available for certain technologies do not seem to correlate to their potential generation capacity. The total increase in Government funding since 1999 is far less than might initially appear. We are also concerned over the ad hoc nature of capital funding announcements and the plethora of funding bodies now involved.

Embedded generation, networks, and the role of Ofgem

There is a significant inconsistency in the way in which Ofgem treats embedded generators compared to network generators. We questioned the regulator on this topic, and he was visibly surprised when our understanding of the situation was confirmed.

We were told by Ofgem that it issues about a 100 documents a year—roughly an equal mix of consultations and decisions. We are at a loss as to how smaller independent generating firms can assimilate and comment on, where appropriate, such a large volume of material.

The Performance and Innovation Unit Review recommends a new DTI objective which, if adopted, will place overriding importance on environmental objectives. It is difficult to see how Ofgem can accommodate such an approach given its present statutory remit. Ofgem's duties under the Utilities Act should therefore be amended to incorporate as a primary objective the need to promote sustainable development.

The Performance and Innovation Unit Energy Review

The Performance and Innovation Unit review fails to provide an assessment of current policy instruments, even though this was an aim of the initial energy work begun in January 2001. We are therefore concerned that the Performance and Innovation Unit review may not adequately reflect the scale of the challenge, and that there now needs to be a specific process for translating its recommendations into specific policy commitments, so that the White Paper forms an action plan.

We are concerned that the DTI's consultation on energy may fail to take forward the debate on the basis of the PIU recommendations, and is in danger of simply revisiting all the issues which the PIU themselves covered.

What should the Government do now?

The key conclusions we would highlight from our inquiry are these:

- Britain has the greatest potential for renewable energy of any country in Europe
- It currently produces less than 3 per cent of its energy from renewables —a tiny proportion which compares very unfavourably with almost all other European countries
- The Government has set a number of targets for renewable production. We will certainly not meet the interim target of 5 per cent of electricity from renewables by 2003. On the basis of present trends, we are unlikely to achieve much more than half the 10 per cent target for 2010.

We therefore believe that there is an urgent need for the Government to show leadership and:

- address the difficulties in gaining planning applications;
- indicate tried and tested technologies which will deliver over the next decade; and
- address the conflicting priorities of market liberalisation and cheap electricity as against our Kyoto obligations.

There are, however, a number of other actions which the Government need to carry out as a matter of urgency, before the White Paper is issued:

- The Government must ensure that Ofgem's terms of reference for the review of New Electricity Trading Arrangement in its first full year place primary importance on environmental impacts
- The DTI should review options for incentivising the development of renewables under New Electricity Trading Arrangement, so that the playing field - so far from being tilted against renewables as at present - should favour them
- The DTI should prepare legislation to amend the statutory duties of Ofgem in order to incorporate the promotion of sustainable development as a primary duty
- The Office of the Deputy Prime Minister should revise planning guidance for renewables as a matter of urgency, and incorporate a presumption in favour of renewables (para 120).

In our view, a cross-cutting unit for sustainable energy policy—as recommended by the Performance and Innovation Unit—is unlikely to be sufficient, and we recommend that the Government should set up a Sustainable Energy Policy Agency.

Annex C: Health Impact Assessment

The main findings and recommendations of the Health Impact Assessment (HIA) on the draft Energy Strategy, held on June 6th 2002 are as follows:

The HIA workshop and the evidence which was prepared to support the workshop (Anderson, 2002) did not identify any major gaps in the draft strategy; most of the important health considerations were already incorporated in the draft strategy.

The strategy team is to be congratulated on the wide range of the work that has gone into the preparation of the strategy and on the diverse types of evidence which have been pulled together.

Recommendations from the workshop relate mainly to the need for further clarity about the ways in which the strategy can be put into practice. In other words, how can the ambitious goals set out in the strategy be achieved?

There are six main recommendations:

- Highlight the ways in which the Energy Strategy is linked to health improvement and how it links to the other Mayoral Strategies
- Make it clear that combining economic development with the promotion of energy efficiency will contribute to health benefits
- Be explicit about the likely impacts of climate change on London's health – and the potential for mitigating London's impact on climate change
- Highlight actions which will reduce 'fuel poverty' and the health inequalities associated with this
- Work with others to provide clear guidance on how to choose sources of fuel and energy, and where to site them
- Make clear that health benefits are an essential part of the common purpose underlying the London Energy Partnership and the London Energy Forum.

The recommendations are described fully in the London Health Commission report. Each recommendation has several specific actions attached to it and the relevant sections of the draft strategy document to which the recommendations and their component actions relate are also included in the report.

Annex D: Evidentiary hearings and seminars

April 10: Renewable energy
Jeremy Leggett and Seb Berry, Solar Century
Chris Dunham and Angela Nauck, Sustainable Energy Action
Neil Evans, ESD (an energy consultancy)
Ian McCubbin, Future Energy Solutions
Mark Allan, Building Research Establishment

May 13: Hydrogen infrastructure
Colin Smith and Dina Shah, Air Products
Ausilio Bauen, Imperial College
Lesley Harding, London Development Agency
Bill Hamilton and Catherine Jones, Transport for London
Peter Mallaburn, the Carbon Trust
Esin Esat and Frank Horan, College of North West London

May 16: Community groups
Louis Sugiyama and Elena Abrosimova, Westminster Youth Parliament
Latania Hudson and Jermanine Oguh, Mouth that Roars (a youth organisation)
Desmond Frederick, UK Youth Parliament
Caroline Jeijne, Centre for Sustainable Energy
Jerome Lejeune and Jim Groux, Agenda 21 Architects
Miranda Dunn, Finchley Society
John Jopling, Sustainable London Trust
Symon Sterne, Creative Environmental Networks
Gayle Verdi, North Kensington Environment Forum
Susie Rabin, Age Concern London
Vicky Carroll and Mark Bennett, Wandsworth Environment Forum
Gwenda Mark, Kingston Agenda 21

May 17: Renewable energy and skills
Chris Dunham and Angela Nauck, Sustainable Energy Action
Esin Esat and Frank Horan, College of North West London
Jen Cook, Cross River Partnership
Tony Stewart, Business Link
Casimir Iwaszkiewicz, Construction Resources
Lesley Harding, London Development Agency

May 20: Renewable energy and planning
Chris Mills, National House Building Council
Bill Dunster, ZedFactory
Alan Byrne, English Heritage
Robert Shaw, Town and Country Planning Association
Chris Bedford, Government Office for London
Andrea Griffiths-James, Nottingham Energy Partnership
Chris Dunham and Angela Nauck, Sustainable Energy Action
Robert Deatker and Paul Mutti, Canary Wharf development
Jake Mathias, Westminster City Council
Godfrey Boyle, Open University
Steve Cardis, London Borough of Merton
Sylvia Francis-Mullins, London Borough of Haringey
Dil Sarkar, Office of the Deputy Prime Minister

May 23: Mayoral advisers
Victor Anderson, Mayor's Environmental Adviser
John Duffy, Mayor's Senior Policy Adviser
David Hutchinson, Greater London Authority, Policy and Partnerships
Joanna Dawes, Greater London Authority, Policy and Partnerships

June 13: the Mayor
Ken Livingstone, Mayor of London

Annex E: Written evidence

Age Concern
Building Research Establishment
Construction Industry Research and Information Association
Creative Environmental Networks
Combined Heat and Power Association
Corporation of London
De Montford University
Ecotricity
The Energy Conservation and Solar Centre
Environmental Services Association
ESD (an energy consultancy)
Future Energy Solutions
Jean Lambert MEP
The Lattice Group plc
Levett-Therivel sustainability consultants
Local Agenda 21 Architects
London Borough of Harrow
London Borough of Merton
London Electricity
London Health Observatory
National Energy Action
National House Building Council
National Right to Fuel Campaign
Salvo
Solar Century
Steve Cardis, London Borough of Merton
Sustainable Energy Action
Unison
Westminster City Council
Woking Borough Council

Annex F: Further information, orders and translations

For further information on this report or to order a bound copy, please contact:

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tom.middleton@london.gov.uk
tel. 020 7983 4206.

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 020 7983 4100.

assembly.translations@london.gov.uk

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

Si usted o algún conocido, quiere recibir copia del resúmen ejecutivo y las recomendaciones relativas 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

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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 kansiwa 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 Sri waaweyn ama farta qalka mafaahin la' luuqa talapalay, ama luuqadaada oo fadlan si ahi fadlan nagala soo xiriir telefoonkan 020 7983 4100 ama email-ka cinwaankuu yahay assembly.translations@london.gov.uk

Annex G: Scrutiny principles

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 the scrutiny work of the London Assembly, including published reports, details of committee meetings and contact information, can be found on the GLA website at http://www.london.gov.uk/approot/assembly/index.jsp

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