

Enfield, global warming and what should we do about it?

Briefing Paper

July 2006

Foreword by Cllr. Michael Lavender, Deputy Leader of the Council

This consultation paper seeks your views regarding a number of initiatives that the Council is considering to reduce its and residents' energy consumption and to create and harness energy. The Council would also welcome your suggestions for alternatives not mentioned in this consultation paper.

Energy prices are rising – by almost 70% so far this year - and will continue to rise. This rise has an impact on the cost of providing services and Council Tax. This has prompted us to rethink the way we provide services or to consider possibilities, which hitherto, would have been rejected out of hand as unacceptable.

Introduction

There is clear evidence that Climate Change due to Global Warming is happening. If the climate is changing it will have consequences for us here in Enfield. Britain produces 2% of global carbon dioxide emissions. Local Authorities are directly responsible for 5% of UK emissions and with Enfield contributing roughly 0.5% of that total.

There are serious financial aspects to this issue. The council uses vast amounts of energy. If we can find away to reduce our energy the money saved could then be spent on services rather than on the cost of providing those services.

This consultation asks your opinion on the options available to the London Borough of Enfield to be part of the solution.

The Science of Global Warming

Evidence of Global Warming is clear. The oceans have already risen by 10 to 20 centimetres. Greenland's ice sheet will begin to melt if the temperature there rises by 3 degrees Celsius. Complete melting would raise sea the sea level by 7 metres. Such a rise could affect many millions of people living at sea level. For example a rise of a metre could affect 25 million people in Europe. With London being a low-lying city it would almost certainly be affected.

Carbon Dioxide is the main cause of global warming. Carbon though is a good thing. It forms many complex molecules that provide the basis for our existence. It also fuels the carbon cycle driven by life itself. Animals also produce Carbon Dioxide when they burn large carbon molecules. Some of the plants and simple animals made of carbon have been buried by geological processes and turned into fossil fuels such as peat, coal or oil. When these are burnt it releases carbon dioxide back into the environment completing the carbon cycle.

The Politics of Global Warming

The main concern in the UK is that global warming is a serious issue that needs to be tackled. The debate centres around the need to balance changes to the way we use energy, with the effect on economic growth. What has become apparent though is that the debate between "the economy" and "the environment" is a false one. This is why chief executives of 14 top British companies met the Prime Minister on the 6th June this year to suggest that the government does more to place restrictions on CO2 emissions to drive development of clean technologies. They realise that climate change will have a negative affect on their businesses and the economy in general.

Thus it is important that locally and in every other context we try to build and maintain a consensus.

How green is Enfield?

According to a recent study sponsored by British Gas each household in Enfield produces an output of CO2 of 5.7 tonnes each year. This places us 163rd out of 386 local authority areas. Enfield also has 100,000 trees and around 2,700 hectares of green space. What effect does this have on CO2 emissions?

Research has shown that suburban places such as Enfield have become a huge "sink" for CO2. The council is currently exploring the theme of "De-urbanisation" as part of its Property Strategy and "Place Shaping" agenda. It involves making the landscape appear less urban, maximising the natural aspects of our environment over the planned and urbanised.

The council itself has recently agreed a new 25-year for the replacement and provision of Street-Lighting that will feature much greater energy efficiency. We also have a "Green Travel Plan" that encourages Council staff to find alternative "cleaner" ways to travel to work. Our Waste Strategy has led to an increase in the amount recycled to 30%. There are sources that we still have to address such as our vehicle fleet and the energy consumption of council buildings.

Energy efficiency has to be the starting point for a strategy of combating climate change. This has already begun within the council's most important building the Civic Centre. The council is introducing a major programme of

change with the imminent introduction of a new lighting system the starting point.

Enfield is a planning authority with a policy that requires that planning applications for new buildings have to pass an environmental assessment. This has resulted in significant savings in energy and water. The Mayor of London's "London Plan" is a part of our development plan and a proposed revision will require new developments to achieve 20% of their energy from on site resources. The Council will be forming its view on the Mayor's consultation proposals, but in general we welcome the use of planning powers to create a step change in the environmental quality of our buildings.

Alternative Sources of Energy

Renewable energy can come from five sources:

- Wind
- Water
- Wave
- Solar
- Crops

Enfield does not have access to the sea or any fast flowing rivers but the other three sources can all be used.

Wind Power

Benefits

- It has been shown that wind power can be effective where the average speed is more than 11 mph.
- It is locally generated
- Can be placed in unobtrusive areas such as along the M25.

Concerns

- They are highly visible
- Can damage bird life

Savings

- It saves on heat and CO2 emissions with one Mega Watt (MW) of wind energy generation eliminates 2,260 tonnes of CO2, compared to generating from coal
- Large turbines generate as much as 1.8MW of electricity, enough to power 1000 homes.
- 10 turbines could power, on average over the year, a tenth of the homes in the Borough and save over 40,000 tonnes of CO2

Solar Power

The best method is to use Photovoltaic systems, which uses cells to convert solar radiation into energy.

Benefits

- Can work even in overcast conditions
- Generate no greenhouse gases
- Can be hidden on roofs
 - The Council's Civic Centre provides an ideal place

Concerns

- Is there enough sun to make solar panels viable

Savings

- 1.3 tonnes of CO₂ for each KW generated
- Even modest and unobtrusive domestic installations can generate between 1 and 3 KW.

Crops

Benefits

- One third of Enfield consists of green belt land
- 1,200 acres of agricultural land is owned by the council and let to farmers, could this land be used in conjunction with them?
- Bio-mass, the name of the material that can be burnt, could be grown locally and burnt locally at the London waste site in Edmonton
- Creates heat and electrical power
- Can also create "Bio-fuel", which is used to fuel the council's fleet of vehicles
 - Only causes a loss of 2% of power

Concerns

- What to do with the waste?

Savings

- Provides fuel for the councils fleet of cars
- It could provide 11 mega watts (thermal) of high water temperature to local homes

The Council's role to provide incentives or payment to provide alternative energy

To encourage the use of alternative energy some local councils have offered discounts on Council Tax to promote the take-up of energy saving initiatives such as cavity wall insulation. This is not always suitable so the council could offer a modest one-off discount on the Council Tax – say £100 – to householders that installed approved equipment.

A strategy to reduce our output of CO₂ can only work if it makes financial sense. The possible projects each pay for themselves over a "payback

period". The council does not have the resources to invest straight away in a whole range of projects with this type of return.

The Council thus seeks your views on a specific proposal. This is that we invest in a **Revolving Energy Fund** that allows us to start off with relatively modest investments – and the first of these would be the investment in energy efficiency such as the automatic lighting controls on our buildings – and then reinvest the money saved in further projects. In this way an initial investment of around £300,000, followed by further annual seedcorn money of say £100,000 can in time lead to a considerable capacity to invest in projects such as wind power and solar power. We would also promise to make maximum use of grant funding that is available from organisations such as the Carbon Trust, the Energy Saving Trust, the DTI Solar Grants Programme and a number of other initiatives.

An initial investment of £300,000 followed by £100,000 for a further 4 years would mean an average cost per household of £2.65 in the first year, and 88p in the following 4 years.

Should the council set targets?

A number of authorities have set targets for combating climate change. The Nottingham Declaration on Climate change is 'a voluntary pledge to address the issues of climate change that represents a high-level, broad statement of commitment that any council can make to its own community'. It is a declaration that over 100 councils have signed up to pledging to tackle climate change. They acknowledge that climate change is occurring and will have far reaching effects. They also recognise the benefits of combating climate change and aim to offer incentives to do so. It commits the council to work with the central government in the delivery of the UK climate change programme. More information on the declaration can be seen at <http://www.est.org.uk/housingbuildings/localauthorities/NottinghamDeclaration>

Conclusion

In facing the challenge of Global Warming the London Borough of Enfield with its partners has the opportunity to create a future in which the worst outcomes are avoided. By providing solutions to reduce CO2 emissions the council hopes to reduce the effect that the Borough of Enfield has on global warming. The council will be able to control the escalating costs of energy by providing local solutions. Through the three sources identified the Council will be able to preserve our Borough as green and sustainable. This can be done. It can be afforded. It will need your commitment, and before we ask for that we are asking for your views, your opinions, your ideas.