



## B2 LOCAL GREEN ENERGY

### Bristol City Council PROACTIVE Local Renewables and Carbon Reduction

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**Organisation :** Bristol City Council

**Short description:** Bristol City Council is the largest employer in the south west of England. It has been a unitary council delivering the full range of local authority services since 1996. Today its 16,700 full and part-time staff deliver over 500 services to 183,000 households - in what is the 7th largest city in England and Wales. The council has an annual net revenue budget of over £365 million and is currently managing a capital programme in excess of £200 million. This includes work to rebuild or refurbish all the city's secondary schools by 2013; upgrade the city's main performance venue to a facility of regional importance; deliver a state-of-the-art museum on Bristol's historic waterfront and build a new £21 million leisure facility for the south of the city.

Bristol was the only UK city to be in the running for the title of European Green Capital and the EU itself has described every shortlisted city as an 'environmental front runner' - something everyone in Bristol can be proud of. The city was given the crown of 'Most Proactive Authority' in the 2008 Green Energy Awards, held by Regen SW.

In recent years, the city council has been awarded the government's Beacon Status for its innovative work in tackling anti-social behaviour, improving private housing, promoting race equality, delivering healthy schools and working in partnership with others to create new very sheltered housing. It has won numerous other awards and accolades for its work on e-democracy, flexible employment practices and, of course, tackling climate changes and reducing energy waste.

Overall, the authority has been judged by the Audit Commission to be 'improving well' and now has an ambitious Transforming Bristol programme in place aimed at ensuring it becomes the best in the business: an excellent authority that's great to work for and one that residents can be proud of.

The council currently has no overall political control and the Cabinet that leads it is a minority administration drawn from the Liberal Democrat group on the council.

## **Executive Summary of your Abstract**

### **Abstract**

#### **Bristol City Council**

##### **PROACTIVE Local Renewables and Carbon Reduction**

Sustainable Energy and Bristol are synonymous, with significant innovations and positive promotion in all its activities e.g.

- Promotion and installation of a large and expanding cluster of biomass boilers in SW.
- Acting as wind developers for two 3MW turbines at land in Avonmouth - submitted for planning permission.

What positive policies are in place and does the capability and political will exist to implement these policies?

- The council currently has a policy to reduce its carbon emissions by 3% year on year. This was adopted unanimously by Full Council in 2007.
- The City Council has also held a Select Committee investigation into climate change the council's management and the recommendations were unanimously endorsed by Full Council in July 2008. see detail below:-
- The Council has a self - funded Energy Management Unit which is a model of best practice in the UK. The unit is arranged as a one stop shop for energy issues in the council carrying out a full range of activities detailed below:

#### **CLIMATE CHANGE SELECT COMMITTEE**

In 2007/2008 the council operated a Climate Change select committee which had the task of reviewing all the council's actions with regard to climate change. Following an initial review utilising the Local Authority Carbon Management Matrix developed by Centre for Sustainable Energy CSE. The sessions were held in public with web cameras so that the proceedings could be watched by the public on the Web. The details are at <http://www.bristol.public-i.tv/site/> .

In addition a public debate was also held at the Museum and Art Gallery on 15 Nov 2007, and a staff survey was carried out

#### **AIMS AND OBJECTIVES**

The Committee agreed from the outset to limit its investigation into what the Council can do to reduce its own and the City's impacts on climate change. The main aims of the Select Committee were therefore to:

- Assess the Council's current performance on climate change management
- Make recommendations to assist improvement in this performance. More detailed objectives were to assess how the Council is managing climate change in relation to:

##### **Reduction of CO2 Emissions**

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- How effective the Council is reducing its own emissions in relation to its own estate;
- How effective the Council is in reducing emissions from the city through its Services;
- How effective the Council is in providing community leadership on the issue of climate change.

#### Adaptation to Longer-Term impacts

- What measures can the Council and its partners put in place to adapt to climate change in the longer-term?

#### Topics

The following topics were selected for analysis:

**Topic 1:** -The Council's own CO2 emissions, in particular energy use and staff training/ awareness raising activities

**Topic 2:** - Improving the energy efficiency of the existing housing stock

**Topic 2:** - The consideration of Climate Change issues in the Local Development Framework and Regeneration/ Economic Development programmes

**Topic 4:** -Transport - in particular improving cycling, walking and bus patronage using area based approaches.

#### Outcomes:

The outcome of this process has been a whole set of actions to be undertaken across the council. In the final published document "Time for Action" there was 41 main recommendations. It is the responsibility of each department to implement these and this will be monitored by the ESU Environment Sustainability Unit.

The following recommendations are specifically related to sustainable energy; however most of the recommendations refer to cutting of emissions.

1. Develop policy and standards for new Council buildings and refurbishments to take into account the future effects of climate change.
2. Increase funding levels for energy efficiency and renewable installations in the Council's estate.
3. Extend the acceptable payback period for energy efficiency and renewable schemes in Council projects.
4. Develop a policy of a presumption to install biomass boilers in new council buildings/refurbishment of existing ones, to include the local sourcing of materials.
5. Ensure that the Council's emerging Economic Development Strategy shows how it will help the city to meet the CO2 targets recommended by the Committee.
6. Adopt a policy for new development that is in line with Policy G and Renewable Energy RE5 of the draft Regional Spatial Strategy (RSS). If the policies are weakened in the final RSS then the Council should implement the stronger version locally as part of its own Local Development Framework. This recommendation to be sent to the Executive Member and the Secretary of State for their support during consideration of the RSS Panel report.

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7. Clarify through a formal assessment, where the opportunities exist in the city for renewable energy or low carbon technologies, e.g. solar, wind, CHP and biomass to be located. Where such opportunities are identified, then a case should be made for them to be implemented.

8. Promote innovation and new ideas such as harnessing hydro-electric power within the city through the Local Development Framework and economic development policies.

## ENERGY MANAGEMENT UNIT

### Energy Procurement

Circ £14,000,000 energy procurement, payment of circ 16,000 energy invoices, and monitoring of consumption. The Energy management Unit promoted the procurement of renewable electricity, since 1998 had a policy of increasing its share of renewable electricity at the time this was very innovative and was the subject of a best practice case study as the market for green electricity was in its infancy. It could be said that the demand for the product by enlightened councils helped the market to mature.

### Bristol City Council Renewable Energy Supply Strategy

Back in 1999 the EMU were successful in obtaining funding to carry out one of the first sustainable energy supply strategies for an urban area. This piece of work carried out by ESD set the outline for where actions could be targeted. This piece of work has been updated as part of the recent Planning Application for wind turbines at Avonmouth.

### Development of Avonmouth wind Turbine project

It was recognised early on that there would eventually be an over demand for renewable electricity and that the council should try to be in a position to generate its own electricity.

The council is probably the only one in the UK which has acted as a wind developer in its own right and carried out over an 8 year period from inception to submission of planning permission for an installation of two 3 MW turbines.

### 1. Management of carbon reduction investment programmes

a) LAEF scheme £900,000 recycling of savings programme –with 93 completed projects saving 1297 tonnes CO<sub>2</sub> a year, and a saving £190,000 a year (based on unit price at start of project so realistically much higher) Total investment (completed projects only) £645,000. Additional committed projects with an investment value of £199,000 predicted to save £60,000 & 439 tonnes CO<sub>2</sub> annually.

b) Self financed energy annual fund of £250,000

c) Developing a Climate Change fund of up to £1,000,000 a year in real terms to expand the renewable energy biomass boilers installation and solar water programmes and other energy initiatives.

### 2. Which policies are being actively implemented through action on the ground?

Bristol's Community Strategy (2003) set a target to cut the levels of greenhouse gas emissions in Bristol by 60% by 2050, based on the year 2000 baseline. In September 2004 the Council adopted the Bristol Climate Protection and Sustainable Energy Strategy and signed the Nottingham Declaration on climate change.

The council currently has a policy to reduce its carbon emissions by 3% year on year. This was adopted unanimously by Full Council in 2007.

3. What has been the effect of its action on the ground? i.e. the number of people who have benefited or the power or heat produced

Bristol City Councils initial three wood chip biomass boilers at Blaise Nursery, Florance brown school and Netham Sprort Pavilion have been followed by four new Bristol Schools For The Future, BSF secondary schools / currently in various stages of construction. Five of the six in the next wave of secondary schools will be also be biomass. The new Museum of Bristol will also have a Pellet Biomass boiler. This will be the largest clusters of biomass boilers in the UK and has had a positive effect of being an example to others and resulting in increased confidence by private sector in biomass boiler installations. The installation at Blaise has seen a number of visits from interested councils and other organizations seeking to carry out similar programmes.

We are setting out a climate change fund to enable us to extend the biomass boiler programme into the primary schools and implement solar water heating where appropriate.

As this wood fuel strategy is advanced thousands of school students in the council area are being heated by wood as a visual demonstration in their own school. This will also act as a driver for them to take into the actions for there own lives having both local and global effect.

In tandem with this the ECO school programme run by the ESU is being introduced into Bristol schools with 13 having achieved Green Flag status and 16 on there way with a silver award. The third year of this programme is under way and this positive eco standard will stand them in good stead for the government Sustainable School Programme which all schools will need to implement by 2020. There is a positive knock on to this programme as interest in renewable energy is heightened and this helps the EMU to carry out energy efficiency and renewable energy projects at schools.

4. What is the significance of what it has done on a county, regional or national level?

#### Core Cities Comparison

As part of the climate Change select Committee Bristol was compared to the other Core cities. DEFRA compared CO2 emissions from all local authorities in 2003. Bristol's emissions at the time were 6.3 tonnes per capita as the Table below shows, Bristol has the second lowest CO2 emissions per capita compared to the other core cities. If the latest population estimates were used it would be 5.7 tonnes for Bristol.

#### Core Cities - CO2 Emissions per Capita 2003

Bristol	6.3
Birmingham	6.2
Manchester	7.6
Leeds	8.0
Liverpool	6.4
Newcastle	7.2
Nottingham	7.4
Sheffield	7.7

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This means that the actions that are taking place in Bristol are actively followed by the other core cities as there is an increasing requirement to reduce emissions.

### BETS (Bristol Environmental Technologies and Services Sector)

Bristol is today emerging as one of the leading centres in the UK for the development of environmental technologies, including world-class companies in renewable energy, waste management and recycling, energy control and sustainable transport, and also for environmental consultancy and specialist services. Bristol City Council is actively supporting the growth of this sector through the BETS (Bristol Environmental Technologies and Services Sector) Initiative. This was established as a partnership in June 2006 by public, private and social enterprise organisations and networks based in Bristol / West of England who will collaborate to stimulate the growth of the local sector and promote it regionally, nationally and internationally as a centre of excellence. In June 2008 the first BETS Expo was held in the city.

### European DISPLAY campaign

The Energy Management Unit took part in the Energy Cities voluntary Energy Certificate Project called DISPLAY and won the Towards Class A award for best Communication Campaign in 2006. As a result of this it is now a leading partner in the extension to the Display Project and recently hosted the meeting for the partners from Ireland, Portugal, the Czech Republic, Finland, Italy, Lithuania, Slovenia and France. The significant project will be communicated to the rest of the Energy Cities members and at European events so having a very wide audience. At these dissemination events the experience of Bristol installing renewable energy can have a far reaching effect.

## Resumé

### Paul Isbell Biography 2008

Paul Isbell has been the Energy Manager of Bristol City Council since it obtained unitary status in April 1996, with over 20 years experience in the energy field. The 10 person Energy Management Unit (EMU) operates as an innovative self-funded business unit within the Council with the over recovery funding some of Bristol's energy Investments.

It is a one stop shop for energy covering the whole spectrum of Carbon Management and energy issues: purchasing, bill payment, energy investment, awareness raising and development of renewables, Display Energy Certificates, Carbon Trading and Government Indices.

Bristol were one of the first Councils to pilot the LAEF Local Authority Energy Finance Loan Scheme which backed by part funding from the Carbon Trust. This has lead to significant carbon savings.

Bristol was also one of the first councils to purchase green electricity, but as far back as 2000 it was recognized that there would become a shortage of green electricity and Bristol has set about developing its own two 3MW wind turbine scheme on its own land with the aim of supplying its own properties.

The Council has instigated a programme of biomass boilers and set up its own wood fuel supply depot winning an award in 2006 for the best renewable energy project in SW for the Blaise Biomass boiler scheme.

They also achieved in 2006 the accolade of the Best EU Energy communication plan for the Display Project which links energy awareness to the European Building Directive Display Poster.

Paul is chair of the Mid-West Energy Group made up of authorities in the West of England and advises on many national energy consultations. Paul was instrumental in developing Bristol City Councils sustainable energy supply strategy, which has been integrated into the Councils Climate Protection Action Plan. Paul has lectured Internationally and written on the subject for Ethos, EIC and Liberty, completing an energy purchasing guide for schools for the UK government DEE (Department of Education and Employment). He is married to Clare with 4 grown up children.

**Recommended reading:** [www.display-campaign.org](http://www.display-campaign.org)

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