



**Brighton & Hove
City Council**

VOLUME 2: PUBLIC MINUTES AND EVIDENCE

**Report of the Environment and Community Safety
Overview and Scrutiny Panel**

April 2011

**Scrutiny Panel on Renewable Energy
Potential**

Panel Members

**Dr Adrian Smith (Chair)
Councillor Warren Morgan
Councillor David Watkins
Councillor Peter West**

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APPENDIX 1

WITNESSES WHO GAVE EVIDENCE (IN ORDER OF APPEARANCE)

| Name | Title | Organisation |
|-----------------------------|---|---|
| Councillor Ayas Fallon-Khan | Cabinet Member - Enterprise, Employment & Major Projects and Lead Councillor for Sustainability | |
| Geoff Raw | Strategic Director, Place, | Brighton and Hove City Council (BHCC) |
| Patrick Allcorn | Assistant Director | Department for Energy and Climate Change (DECC) |
| David Payne | Sole proprietor | Cissbury Consulting |
| Will Cottrell | Chair | Brighton Energy Co-op |
| Judith Beard | Sustainability Policy Co-ordinator | Eastleigh Borough Council |
| Chris Rowlands | Director | OVESCo (Ouse Valley Energy Services Company Ltd) |
| Michael King | Associate | Combined Heat and Power Association (CHPA), a co-founder of Aberdeen Heat & Power (a not-for-profit ESCo) |
| Sayed Ahmed | Consultant | Arup |
| Jae Mather | Director of Sustainability | Carbon Free Group |
| Peter Davies | Development Director | Shoreham Port Authority |
| Dr Phil Webber | Head of the Environment Unit | Kirklees Council |
| Howard Johns | Managing Director | Southern Solar, also the Chairman of the Solar Trade Association and the Founder of OVESCo |
| Ross Gilbert | Director | Quoin Estates and Developments |
| Daren Howarth | Consultant | CLEVEL |
| Helmut Lusser | Chair | Hove Civic Society |
| John Kapp | Secretary | Renewables Infrastructure Group (RIG), |

| | | |
|-------------------|---|--------------------|
| | | Hove Civic Society |
| Thurstan Crockett | Head of Sustainability and Environmental Policy | BHCC |
| Martin Randall | Head of Planning and Public Protection | BHCC |
| Roger Dowty | Design and Conservation Manager | BHCC |
| Sam Rouse | Air Quality Advisor | BHCC |
| Angela Dymott | Head of Property and Design | BHCC |
| Glynnan Barham | Energy and Water Manager | BHCC |
| Jugal Sharma | Lead Commissioner Housing | BHCC |
| Nigel Manvell | Value for Money Programme Director | BHCC |

APPENDIX 2

BRIGHTON & HOVE CITY COUNCIL

SCRUTINY PANEL ON RENEWABLE ENERGY POTENTIAL

12.00pm 6 DECEMBER 2010

HOVE LIBRARY

MINUTES

Present: Dr Adrian Smith (Chair) and Councillors Morgan and West

Also in attendance: Karen Amsden (Overview & Scrutiny) and Thurstan Crockett (Head of Sustainability & Environmental Policy)

1. PROCEDURAL BUSINESS

There were no declarations of interest.

Cllr David Watkins sent his apologies. No substitutes are allowed at ad-hoc panel meetings.

No party whip.

2. CHAIRMAN'S COMMUNICATIONS

The Chair opened the meeting by stating that the aim of the Panel was to learn how to develop renewable energy in the city and consider its ambitions for the future. The witnesses today all have relevant experience of this issue. The Panel was interested in a wide range of issues, including both renewable energy for electricity and heating, and wished to hear from both private and public sector stakeholders.

3. WITNESSES

Councillor Ayas Fallon-Khan introduced himself as the Cabinet Member for Enterprise, Employment and Major Projects, who also has the lead for Sustainability.

He told the Panel that sustainability was at the heart of the Administration's programme. The city was keen to retain its status in the sustainable cities index. It was the only city whose reputation and performance was good enough to remain in the top 3 of the index. Pro-active work was taking place

to attract inward investment, including environmental industries and renewable technologies.

Q: Can a general ambition for sustainability be developed into active support for renewable energy in Brighton & Hove?

AF-K: We are pro-actively seeking investment in areas such as Shoreham Harbour which needed employment opportunities rather than housing. This would be a perfect area for renewables. Businesses like SeaRoc (who have grown from 15-50 people, E.ON and SInC (including Elektromotive who have a large contract to install electrical charging points in London).

Q: How can these examples be built upon?

AF-K: The key issue to address is office accommodation to enable companies to expand.

Q: The opportunities from the Feed in Tariff (FIT) are leading many German manufacturers of solar PV to think of relocating? How is this city preparing to attract them?

AF-K: The main opportunities are solar PV and hot water. We are offering grants to owner occupiers and leaseholders. A desktop survey is assessing roof space and loading up space.

Q: How do these actions link up with the vision for renewables and the 20% target?

AF-K: Want as much renewable energy as possible as it will mean people paying less for fuel. This will include helping with advertising and communications, to increase householders' understanding of the issue. We are part of 10:10 and renewable energy is going to be a small part of sustainability. Not keen on targets as they may fall prey to the broader economic situation e.g. the recession.

Q: What do you think is the added value of having organisations such as E.ON in the city (apart from education and training) - as was concerned by their recent presentation?

AF-K: The 2 universities and City College are key players and have met with them all about aligning their courses to match up the needs of companies coming into the town. The city is losing graduates to other places such as Bristol. E.ON is brilliant news in terms of supply chain and will help local businesses and retain graduates. It is a city wide strategy to work with such people and retain them for the next 20-30 years.

Q: Do you think that flagship projects are important?

AF-K: One can put local authority money into flagship projects. E.ON means so much more than token projects such as plans to put wind turbines on Kings

House. This would have cost £60,000 and taken about 30 years to repay. Such token projects are a waste of taxpayers' money.

Q: Is the recently announced energy co-op for the housing stock a flagship project?

AF-K: The aim is to be a pioneer in the city and minimise the impact of rising fuel prices. Will be using the Energy and Water team and the Architect and Design team and would welcome a recommendation from this Panel about how to speed up this process. Such projects are valid when they bring a benefit to the community.

Q: Are you seeking to learn from other cities such as Birmingham and Bristol?

AF-K: The Sustainability team is very well networked to gain advice and good practice. This year they hosted a conference on the Evolving Seas attended by 250 organisations and welcome other opportunities for networking.

The Chair then thanked Cllr Fallon-Khan for coming to give evidence to the Panel.

Geoff Raw introduced himself as the new Strategic Director of Place. The services he was responsible for included Planning, Regulatory Services, Waste, City Parks, the natural environment, housing and enterprise. The issue of renewable energy in terms of council assets was the responsibility of Charlie Stewart who was the Strategic Director of Resources.

He was not a conventional Executive Director in that his role was not primarily about direct line management of service delivery but rather the intelligent commissioning of council services alongside other public agencies. Service Heads reported directly to the Chief Executive. Intelligent Commissioning was intended to achieve better specified public services that effectively deliver for residents and businesses, currently in a period of financial constraints. He had been in post for four weeks.

His key areas of interest in relation to renewable energy were:

- Return on public investment
- Appropriate technologies
- Effective procurement

He referred to the national target for renewable energy and the citywide CO₂ target. To date the focus had been on demand reduction e.g. through energy efficiency programmes. Expanding renewable energy generation and use was a significant ambition for the city and was highlighted in the Sustainability Community Strategy.

He then went on to outline some of the council's current initiatives and ambitions:

- The Planning Service were exploring the use of heat mapping to understand the potential for district heating systems, biomass or use of waste heat – for example that from Shoreham Power Station.
- There was further scope to work in partnership with main Energy Companies
- There was further scope to explore the potential of an Energy Services Company (ESCO)
- Installing solar heating and photovoltaics (PV) was a tried and tested technology and there was greater scope for the city to take advantage of Feed in Tariffs (FIT).
- Some work had been undertaken to assess the value of on-site wind energy. Off site wind energy was more likely to generate greater benefits but the siting of this could be controversial. Further work might be undertaken to explore opportunities

In its 2008-11 Corporate Plan, the council has outlined a commitment to reduce the city's carbon footprint. This would be measured as a success if, by 2011:

- CO₂ emissions per head and CO₂ emissions from council activities had reduced
- More wind, solar and other sustainable energy is installed locally

Leadership from the council was also evident in the 10:10 initiative. The council's Carbon Management Programme also set an ambitious initial target to generate 5% of our energy from renewables by 2012. As the council had an energy bill of £4-5m per year, there was a good business case for scrutinising the energy bill and assessing the scope to use renewable energy to reduce the council's carbon footprint and reduce costs. The authority also had a good record, through the Architecture and Design team, of integrating renewables into existing buildings.

He highlighted a couple of good practice examples in the city. Firstly the Westergate Business Centre which was a joint regeneration project in Moulescombe. Thurstan Crockett then explained that this was an outdated industrial estate, where a detailed project plan to convert it into a sustainable industrial centre was developed using funding from the Single Regeneration Budget (SRB) and EB4U. The specifications included solar pipes, a wind turbine and ground source heat pumps (GSHP). At that time many renewable technologies were in their infancy, in particular difficulties with GSHP and solar, but they went the extra mile to make them work. The aim was to incorporate renewable energy technology wherever possible. The other example was at Downsview Link College.

Geoff Raw told the Panel that the energy efficiency of the existing housing stock had been improved, including loft insulation and cavity wall insulation. Solar water heating systems had been installed in 141 homes. This addressed both fuel poverty and reduced carbon emissions. There would be further opportunities in the future, subject to the business case stacking up.

The key roles of the council were:

- Supporter: both in purchasing and backing schemes. The council had bought electricity produced from renewables in its main supply contract, which represented a multi-million pound investment in the sector.
- Facilitator e.g. backed EON in building a major new windfarm off the Sussex coast
- Developer: taking forward a vast array of projects and development initiatives. Strategic Directors were carrying out a review of major projects and this would include an assessment of the potential for renewable energy as part of this review. Renewables potentially could offer the city a way of future proofing its energy supply and affording a competitive advantage to business.

Questions to Geoff Raw (GR) and Thurstan Crockett (TC)

Q: How strong a role will the council take on renewables, or will it be left to the private sector to develop them?

GR: We intend to review the asset management strategy to get wins from our existing facilities and become more cost effective, while reducing CO₂ emissions at the same time. In our review of major projects, we will consider what the scope is for including renewable energy as part of the criteria for evaluating schemes. The council will seek to invest wisely e.g. based on which are the best technologies and the longevity of the schemes. This will avoid setting up pilots with untested technology which then do not perform.

Q: Wind turbines were given as an example, are the current ones effective and how does the Planning process respond when the proposed turbine is not wanted by the community?

TC: The majority of these wind turbines were installed 5 years ago. Recent evidence that urban micro-generation only works if the site is very high. Other sites, such as Whitehawk have not performed well. Larger turbines are needed but may not be popular in the suggested area.

GR: Based on some of the expert feedback previously seen, micro generation wind turbines seem to be of very limited benefit. In terms of larger wind turbines, the community need to consider this issue with Members, for example whether to situate them on the South Downs and/or offshore. Offshore wind seems to be the best option given the government's policy focus. The council will need to feed its views to central government.

Q: How can the council make best use of the Feed in Tariff (FIT) opportunities?

GR: By:

- Reviewing major council projects (and exploring renewable energy opportunities)

- Ensuring politicians are provided with the financial modelling to support them in making investment decisions
- Modelling FIT rate scenarios

TC: Detailed work is being carried out by Housing and Property Services on the potential of both the council's housing stock and its own property. This will be used to develop financial options and feed into the procurement process.

Q: Will the council take forward the issue of renewable energy if it considers it to be for the well-being of the community, rather than just for financial reasons?

GR: Well being does come into the equation, but projects need to be viable particularly when public investment resources are scarce.

Q: Isn't there also a need to be innovative?

GR: There is a duty to find out what resources are available to fund these schemes and report them to Members. There is a strong appetite in the city to explore ways of increasing energy efficiency. The council also has a role in keeping the public informed about renewables e.g. providing Planning advice & information on our website, such as funding opportunities.

Patrick Allcorn (PA) told the Panel he had worked at DECC for the past 12 months. His focus was the community ownership of renewable energy. The FIT can have an important role in encouraging community scale projects. The view of DECC is that the city needs a mix of commercial and small scale projects. The council needs an overall local strategy, which links demand and capacity. Energy efficiency work is the first step and the Green Deal can be used to support householders.

As part of the localism agenda, the Government is keen on community empowerment. Communities can be empowered to design and develop their own commissioning. The FIT can provide small returns for the community to reinvest in local projects.

The Government has created the framework e.g. the Carbon Reduction Commitment scheme (CRC) and the ability of authorities to sell their own energy. Having set the direction of travel for local authorities to develop renewables, Members need to decide if they want to tell electorate that they had not taken advantage of the opportunities. But by 2020 want 1/3 of electricity to be renewable and 1/8 of heat.

It is important to look for returns over a relatively long period. These will need to be commercial prospects, as grant funding will not be available. A broad strategy is needed, instead of focussing on new developments, because the existing stock (80%) is not going to all change by 2020.

Asset management work should look beyond one's own properties, for example if installing a District Heating System or Combined Heat & Power

(CHP) one should consider if it could be scaled up to provide heating to surrounding buildings, such as from schools or leisure centres to nearby homes.

A council has 2 roles in relation to renewable energy:

- Commissioning projects
- Facilitating other projects – even if it does not want to invest in the project e.g. can assist in forward planning (indicating where a scheme could go ahead)

The TCPA has just issued best practice guidance 'Planning for Climate Change' which draws on the work of PPS on climate and energy.

http://www.tcpa.org.uk/data/files/pccc_guidance_web.pdf

This is not government advice, which will be in the Localism Bill.

An important role for the council would be to map where technologies, e.g. wind and solar, would be viable in the city. This information could be disseminated to communities to enable them to develop their own schemes and to the Local Strategic Partnership (LSP). The LSP could act as a co-ordinator, broker and influencer. Councillors have a role as community leaders, putting forward the business case and opportunities for the community. This can also counteract the feeling of not wanting renewables in their own areas.

One should be maximising the energy from waste, unlike at Shoreham where the majority of the heat ends up offshore.

Examples of good practice can be found from:

- 'Compare Renewables' section on the website of Local Government Improvement and Development
<http://www.idea.gov.uk/idk/core/page.do?pageId=23051802>
- Community Energy Online on the DECC website
<http://ceo.decc.gov.uk/>
- Homes and Communities Agency
<http://www.homesandcommunities.co.uk/low-carbon-infrastructure>

Renewable energy does not need to be expensive, for example the aim of FIT is to make it commercially viable. The Renewable Heat Incentive (RHI) is currently being looked at for all forms of heating, including large scale. Rather than seeking to meet the needs of a specific building, a wider range of opportunities come with the scaling up of projects e.g. selling the additional electricity.

Green jobs are key, including:

- Manufacturing
- Installing
- Maintenance

It is important to upskill the existing relevant workforce in the city, e.g. plumbers, and ensure they are trained and accredited to work with renewables.

The added benefits that come with community energy are hard to measure but include:

- Increased engagement
- Better understanding of their neighbourhood

Questions to Patrick Allcorn

Q: How is the sector regulated to protect the community?

PA: We are working with Co-ops UK to develop a potential model. This could involve the community setting up the organisation and gaining planning permission, then selling on the organisation. This is due to the complexity of taking projects further, but it has been estimated that planning permission is worth £1m per MW. The community needs to understand its rights and the importance of getting legal representation when drawing up contracts. For example Carbon Leapfrog which offers free legal advice <http://carbonleapfrog.org/>, for carbon offsetting. A co-op offers the strongest model for achieving reinvestment of money in the community.

Q: How can one incentivise private sector landlords?

PA: It is about communicating the financial opportunities, e.g. from FITS, through engagement and information sharing. There is still 40 years to meet the target, although the 2020 target is more difficult and for this need to focus on early adopters and near market opportunities.

Q: What about accreditation and training?

PA: The Government is releasing a microgeneration strategy this month. The FIT can only be claimed if one has used an installer accredited by the Microgeneration Certificate Scheme (MCS) <http://www.microgenerationcertification.org/>
This still needs to be determined for large scale projects.

David Payne (DP) explained to the Panel that he used to be a Planning Manager at the Regional Assembly. He had led on the regional strategy for Renewables, and had recently finalised a review of renewable energy and combined heat and power potential in the South East (using DECC funding) which was intended as a resource for local authorities to use. The regional heat mapping identified key potential sites for CHP including Shoreham.

He was currently working with Hampshire to assess the potential of:

- Installing large scale Photovoltaic (PV) panels on all public sector estate
- Improving the energy efficiency of public sector estate
- Domestic retrofit scheme using invest to save

The Hampshire Partnership is looking at different models for delivery, and the risks and advantages of different approaches including legal, financial, procurement, and technical issues. This includes assessing the pros and cons of investing its own money v. outsourcing. While other councils have opted to lease roof space for installation of PV, such as Winchester, this misses out on 25 years of revenue from Feed in Tariffs - for only 8-10 years pay back. Hampshire County Council is also looking to work with other public sector partners to ensure they do not miss the opportunities that come with scale.

FITs and local authorities' ability to sell energy have been very important drivers making renewables, especially PV particularly attractive at the moment. There was a danger of taking too much time undertaking too many studies and missing out the financial opportunities presented. The key opportunities in the city are in PV (given quality and quantity of solar energy), but also wind and biomass from waste. It was important to look beyond the city boundaries.

Q: Are there problems with maintaining PV in coastal areas?

DP was not sure whether there were problems.

He highlighted guidance (for example PPS22) on the development of renewables in national parks meaning some development such as commercial wind would probably be difficult to accommodate. Isle of Wight had a good renewables policy
http://www.iwight.com/living_here/planning/images/2ProposedSubmissionCoreStrategy.pdf

This has included setting out targets and making clear their expectations and ambitions which is very useful for developers (including a map of where they do not want developments).

Q: What opportunities should be looked for at the regional level?

DP: One should look for both economies of scale, beyond the city boundaries and working with others including ensuring departments within the council are working together. The Local Economic Partnerships (LEPs) may have a role in promoting low carbon.

Q: Given the uncertainties around FIT, is it possible to future proof schemes?

DP: This is a reason to move quickly as it is known that the rate will go down. Each day you are not investing, you are not getting a return. If one has the cash or can borrow prudentially, then should get on with it.

Q: Are there capacity issues e.g. sufficient people to install?

DP: The information is anecdotal e.g. China looking to double its production of PV which would decrease the price. Accreditation presents a massive opportunity, e.g. to upskill, which will continue while the FIT remains - even if the tariff rate drops.

PA confirmed that the FIT review would be based on reduced costs of installing and maintaining renewables. This is to ensure that people not making big profits from renewables. He wanted to highlight the work of Exmoor on renewable energy, led by the National Park. One could look to them for best practice in this area.

DP: Most ESCOs have used district or community heating, which can be expensive. The Localism Bill will present a big opportunity for neighbourhood investment.

Q: When local authorities are developing investment plans, do you think that the focus needs to be on capacity? For example if training and accreditation are the weak links – should the solutions include financial support and a confident pathway?

DP: The market for this industry is being stimulated.

Q: Although the demand may be being stimulated, do you think there is the capacity to respond?

TC: A bottleneck next year in installing, could mean missing out on maximising opportunities. The longer term goal of FIT is the establishment of energy companies which would mean that the treasury did not need to underpin this sector.

PA: The diminished FIT in Spain has led to reduced demand in both Spain and Germany and the benefits have not been felt there in the local community. One needs to consider the European capacity for renewables. Get on with it quickly.

Will Cottrell (WC) introduced himself as the Chair of the Brighton Energy Co-op which was a community funded scheme for renewable energy. He observed that he could hardly see any pioneering renewables in the city. In contrast to Cllr Fallon-Khan, he felt that flagship projects were good. Despite 97% of businesses failing in the first 2 years, one needs to look for the projects that work and take them forward.

He felt that the local authority could take on an enabling role in the following ways:

- Supporting through the Planning process
- Locating office space
- Showing its support for the sector

For example, a developer of renewables visiting potential sites with a view to entering a 25 year lease, could find it very useful to have some official sanction (e.g. support from the council) to assist in their negotiations.

He felt that setting targets led to setting ambitions.

The main barriers the Co-op had encountered in relation to solar, was that of identifying and securing sites to install. One needs to enter into a contract for 25 years. It would be good to have model contracts to call upon, as otherwise one is heavily dependent upon solicitors due to the complexity. In their experience, the bottleneck is in securing sites, not installing the technology. This is not just true of community based schemes. For example, if BHCC took a collective decision on roof spaces this would release a large number of sites. One could set a target of 10% in 5 years and this could raise £1m pa.

Q: What demand do you think there will be to join your co-op?

WC: We have secured 350 members without significant marketing. There are currently a limited number of investment opportunities, for example the state of the housing market. People are interested in the rate of return offered.

Q: This form of action can bring double carbon benefits and its community roots can result in the seeding of other projects. What further projects and partnerships do you intend to develop?

WC: We are looking to learn from Low Carbon West Oxford. <http://www.lowcarbonwestoxford.org.uk/index.php> who are mentoring the Co-op.

AS: One of the benefits of co-ops is the local multiplier effect.

Q: Do you anticipate that the Co-op will have a difficulty in establishing its credibility?

WC: We are establishing our organisation and have set up a board with 3 directors including an accountant and a solicitor. It would be easier if the Co-op had an installation under its belt. However it is talking to the widest possible group of people to increase its credibility. In Denmark had been set of 20% of renewable to be community owned. The cost of installation has reduced by 10% in the last 6 months, primarily due to lower office costs for installers as their numbers increase. One could decide to install renewable energy later in order to get it cheaper but at the same rate of return. However, this could be risky due to capacity issues.

Public Question: The council owns a number of industrial buildings, could one install solar panels on? What about tidal energy?

AS: This scrutiny is interested in near term opportunities.

4. FUTURE MEETINGS

5. A.O.B.

The meeting concluded at 14.20

APPENDIX 3

BRIGHTON & HOVE CITY COUNCIL

SCRUTINY PANEL ON RENEWABLE ENERGY POTENTIAL

10.00am 18 JANUARY 2011

COMMITTEE ROOM 2, HOVE TOWN HALL

MINUTES

Present: Dr Adrian Smith (Chair), Councillors Morgan, Watkins and West

Also in attendance: Glynnan Barham (Energy and Water Manager), Karen Amsden (Scrutiny Officer), Giles Rossington (Senior Scrutiny Officer) and Jonathan Barton (Scrutiny Intern)

6. PROCEDURAL BUSINESS

There were no declarations of interest.

No party whip.

7. MINUTES OF THE PREVIOUS MEETING

The minutes of the previous meeting were agreed.

8. CHAIRMAN'S COMMUNICATIONS

The Chair opened the meeting by thanking everyone for coming to the second meeting of the scrutiny panel. The focus of the first meeting had been on national and regional issues. The focus of this second meeting was to look at good practice in other authorities and organisations.

9. WITNESSES

Judith Beard (JB) introduced herself as the Sustainability Policy Co-ordinator for Eastleigh Borough Council. Her role was to ensure that council operations delivered sustainable economic, social and environmental policy.

There was a strong commitment by Eastleigh Borough members to deliver sustainability. The council's climate change strategy aimed to make the borough carbon neutral by 2012 and they were a signatory to the 10:10 campaign.

Eastleigh had no housing stock so were showing strong leadership in developing renewables on council owned property and in partnership with privately owned properties

The Get Set Trail aimed to get renewable energy (RE) in public places. So far plans included installing solar Photovoltaic (PV), solar thermal, wind turbine and ground source heat pumps in two country parks. In 2007 a Combined Heat and Power (CHP) system was installed at a leisure centre providing heat and electricity for the leisure centre and heat to the Civic Offices. They were also looking at for micro-hydro and micro-CHP to add to this scheme. However, research conducted into micro wind turbines concluded that they are not worth pursuing in the district of Eastleigh. This highlighted the importance of conducting good research. They were currently piloting a micro-CHP scheme to assess its usefulness.

Currently the council had a commitment to RE but had not set targets. They offered low cost loans which were originally designed to help low income homes carry out home improvements and energy efficiency work, but the scheme had been expanded to include funding for RE projects. The loans were designed to help residents with the initial costs of installing RE, because initial costs often discouraged residents from installing their own projects. The council provided information for residents on their website and through their local paper Borough News.

Their Green Energy Reserve Fund was set up in 2001/2, because the Leader wanted to have money to put towards energy efficiency works and RE in community buildings and settings. This had resulted in energy audits of a range of community buildings being carried out to assess which form of RE would be suitable. The Fund could also be used pay for planning application fees for any RE retrofits, but in most cases this was now only needed in conservation areas or for particular technologies.

Solar PV and the Feed in Tariff (FIT)

Their focus was on council owned buildings as they did not have any housing stock. At the same time they are working with Registered Social Landlords (RSLs) to encourage them to put RE on their housing stock. They have identified which council buildings were suitable and were looking at either doing the work themselves or renting roofspace to another organisation. One consideration is whether we look to put any profits from installing PV on our own buildings into a community fund to pay for additional RE projects in community settings. A cabinet decision on this would be made in a few months.

An on-shore wind assessment confirmed that the area was not really suitable, so the council is not considering this.

The most time consuming part had been the tendering process, in particular the legal and finance issues. For example they installed a large wind turbine in a country park which has not performed as expected. They had a good working relationship with the company, but think that the council should have included something in the contract about expected performance.

The council was considering setting RE targets for its own buildings, but think it would be too difficult to set targets RE for the wider community although will continue to show leadership, work in partnership and influence where possible.

They have a combined heat and power installation which links the leisure centre and the Civic Offices. Would like to try and extend it to other buildings such as local hotels.

They were planning to carry out a heat mapping exercise e.g. to assess the potential for CHP in town centre linking a proposed new hotel and council buildings. The council was having regular meetings with Cofely.

To date the council had not experienced any capacity issues with RE, but with PV there would be a time lag both with the provision and maybe the installation due to demand starting to outstrip supply. They felt that FIT had given the impetus and led to setting targets for increasing renewable energy.

The council split its time equally between energy efficiency, which was especially important for those in fuel poverty, and RE. One of the council priorities was to be carbon neutral in key business activities. The council had set up CarbonFREE (Carbon Fund for Reducing Eastleigh's Emissions). More information can be found here:

<http://www.eastleigh.gov.uk/waste-recycling-environment/sustainability/carbonfree-fund.aspx>

As part of the Environmentally Sensitive Development Supplementary Planning Document (SPD), developers are expected to source a certain % of the required energy for the site from renewables. If this was not feasible, then the developer had to contribute to CarbonFREE. This was just starting and has not been tested yet.

Q: This is fantastic work, how is CarbonFREE being funded?

JB: CarbonFREE is a fund where the council and others can compensate for their carbon emissions. Money from the fund currently pays for loft and cavity wall insulation in private homes for those who are not eligible to receive free insulation via other schemes. The fund was established as part of the council's commitment to be carbon neutral in its key business activities by 2012. The council must compensate, at a rate of £20 per tonne, for any carbon emissions that it cannot avoid. Local people and businesses are also invited to compensate their own emissions through this fund. More information can be found at the link detailed above.

Q: How have you overcome difficulties with the planning process?

JB: There have not been many difficulties as all of the applications have been able to provide sufficient renewable energy on site. The SPD will be used if the developer cannot provide the required renewables on site. In this instance the developer will be expected to make a suitable contribution (achieved through a Section 106) into CarbonFREE. This money will be spent on either energy efficiency or RE on community buildings local to the development.

Q: Were there any organisations/resources that were helpful to you when setting this up?

JB: As an early adopter, they have had to learn as they went along, although have also learnt from the experiences of Southampton. They have been more in control of the CHP installation, but when putting up a wind turbine in 2001/2 they thought it would be easy and may have missed some things in the process. They are part of a large scale insulation programme with other District Councils and Hampshire County Council. Regular meetings with other District and Hampshire County Council, as part of a Climate Change Officers group, have also proved extremely helpful.

Chris Rowlands (CR) introduced himself as a Director of OVESCO (Ouse Valley Energy Services Company Ltd) and an active member of Lewes Transition Towns. He gave a shortened version of the presentation which can be made available on request from scrutiny@brighton-hove.gov.uk

OVESCO was set up in 2007 by Transition Town Lewes and became an Industrial & Provident Society (IPS) for community benefit in 2010. It runs a renewable energy grant scheme, participates in the **Isn't it Bonkers** campaign and has held eco open homes. They were currently doing a lot of networking and energy efficiency consultancy. Their aim was to increase local empowerment and local ownership.

The benefits of being an IPS included:

- The ability to issue shares, which local authorities can invest in
- Public tax benefits
- Could also look to bring in extra money e.g. through an ethical bank

There was a lot of interest in Lewes in investment.

He outlined the stages that Brighton & Hove would need to go through, which included:

- Finding feasible sites
- Working with partners e.g. schools and local businesses
- Engaging the community
- Installing appropriate technology

The key sources of funding included:

- FIT
- Renewable Heat Incentive (RHI)
- Selling energy

For OVESCO, the aim was that the community gained the return rather than big banks. A % goes back into other projects and enabled them to continue to provide energy advice. They wanted to build up a portfolio of projects and become financially sound as the grants come to an end.

An example of a project OVESCO was working on at the moment was to install 550 Solar PV panels on an industrial estate. This would represent 980KWh and the total worth of the project was £360,000.

Their key focus was on Solar PV. In the past had carried out a study on hydro power, but because of FIT – Solar PV was easier and they were seeking further partners. They were already working with a range of partners including the Brighton Energy Co-op. This year they would be undertaking their first share issue and getting their first project off the ground.

Q: How do you think that BHCC can help community energy?

CR: The council could help in the following ways:

- with expressions of interest
- investment – councils are able to borrow at relatively low rates, this could finance 50% and then other 50% from the share issue. This can be profitable for councils

- pilot projects to show how RE can work
- help at the early stages – they were helped by Energy for All

Q: Did any conservation issues arise when you tried to set up a hydro project at Barkham Mills?

CR: The chief concerns were raised by anglers, even though they were looking at fish-friendly installations. This project is on hold, but would like to look at the site again. But FIT had now made PV and other technologies more attractive.

Q: Do you think you will be able to attract sufficient community investors?

CR: Do not anticipate any problems. For example, Energy for All were oversubscribed. They will be offering a 4% rate of return and tax incentives, which was so much better than banks.

Q: What is the structure of OVESCO?

CR: It will be able to take on employed staff, if the funding comes through for a grants funding person (this bid for ERDF funds via the BER has now failed, but OVESCO is seeking alternatives). The partnership between Lewes and Acorn has produced a list of most suitable sites for RE and a list of potential council buildings. Currently the most viable projects are to install solar panels on industrial estates. My post was funded by GOSE to deliver the grants scheme, and have given out £500,000 in grants.

Q: There are different models for how to install and run RE projects, what is your USP?

CR: The investment from the community in RE. This will come either because they believe that RE is a good idea, or they are attracted by the rate of the return. This will include people who cannot personally have PV installed. The PV for free schemes on offer now may seem less attractive or reduce in number if FIT rates go down. Investing in community RE can also be good PR for commercial partners.

Q: Although your current focus is on industrial units, would you consider installing PV in fields?

We would only consider this as a suitable scheme for an IPS if it was in an area where there were too many fields, as really want to focus on the tops of buildings.

Michael King (MK) introduced himself as working for the Combined Heat and Power Association (CHPA), a co-founder of Aberdeen Heat & Power (a not-for-profit ESCo) and retained by organisations including the Homes & Communities Agency, Energy Saving Trust and local authorities such as Islington Council and Huntingdon Council.

He explained that District Heating (DH) had the following advantages:

- Scale - so could use technologies which would not be available to single buildings
- Different users use power and different times of day, so you could aggregate the power. This meant a smoother load curve and a more efficient use of energy
- Better fuel utilisation and longevity of installation

Combined Heat and Power (CHP) was a process to capture waste heat from electricity generation to use it for heating purposes. CHP could be offered at different scales ranging from power station level to individual buildings. The advantages of CHP included:

- Carbon savings
- Improved energy security as the power is coming from a range of sources
- Greater affordability - 80% of the country is reliant on gas for thermal needs and CHP enables it to be reused more efficiently.
- Enabled local heat distribution which can increase local control and accountability.

He believed that the RHI would not currently benefit CHP at all, as it was gas fired. However the RHI rules may be changed in the future. Electricity was a higher value energy and the RHI would incentivise providers and suppliers to collect waste heat and supply heat. This could lead to renewably fired DH systems.

He felt that it could be difficult to look for funding for renewable energy to finance CHP as gas is understood and banks willing to loan money for such projects. With green technologies it was important to use the advantages of scale e.g. if you halve the diameter of a wind turbine then you reduce the energy produced by eight fold.

DH projects could not be done everywhere because they were:

- Location specific, requiring a density and diversity of buildings
- Dependent on an anchor load (single large consumer) e.g. hospitals, leisure centres or universities

In dense urban areas one could have both DH and biomass.

The key ways that a local authority such as BHCC could enable a DH scheme would be to:

- Incorporate it into the planning framework, this reduces the project risk and capital costs
- Assist with the financial modelling
- Enable the project by offering its own buildings as an anchor load. In Aberdeen this was high rise social housing estates, these were done in clusters and then joined into a ring main to give them resilience and energy security.

He felt that the local authorities are key to making DH projects happen. The planning process was essential in seeking innovative ways to fund DH projects. Firstly, in committing own buildings as loads, which could greatly reduce costs through prudential borrowing.

With new buildings, developers could be expected to pay into a renewable fund if they cannot achieve zero carbon in their buildings and then this could be used to fund schemes such as DH.

Examples included Huntingdonshire where developers who could not achieve 70% carbon free, then pay into a local fund – Allowable Solutions. In St Neots this could bring in £17m to spend on a district heating network for an eco-extension to the town. This could bring a lot of opportunities for innovative funding solutions.

It was possible to involve communities because they want heat which is:

- Affordable
- Reliable
- Controllable

Heat which was clean and green is an added benefit to them. At first it was difficult to get such high level skills as these projects are very big and complex. But now the community was ready and it was all local people on the Board and this was a community owned co-op. However one needed a focussed board, because the project can be compromised if the accountability was made too wide.

Q: Is it more expensive to put DH in existing cities?

MK: New build is cheaper because it is a soft dig and other utilities can be installed at the same time. However, new buildings require less heating and there are risks associated with the build-out – if the infrastructure is installed but the houses don't get built because of a dip in the housing market then there are no revenues to support the capital investment. It can be less risky to use existing stock as the loads are high and established. For example in Aberdeen it had been installed in flats which were system built and the infrastructure can be put in the same place. In terraced housing, each home has to be bespoke e.g. the boilers are in different places making the project more complicated and raising costs. If the property has a preservation order on it, this can be very expensive. However, it may be the simplest and cheapest way of making such a building zero or low carbon.

Q: Who benefits from shared heating?

MK: DECC have agreed that it is a cost effective way of reducing carbon but can cost between £4,000 to £6,000 to install. Major social landlords can plan long term to cover the upfront costs, knowing that they will save money in the future e.g. not having to replace condenser boilers. But this is harder for individuals and smaller landlords. Private landlords are less likely to put the money up front.

Using a not-for-profit model when you reach the limit of where you can ship the energy you have produced into higher density areas, then you invest the revenue raised back into extending the network into lower density areas and build out organically.

In a city such as Brighton, the key was mapping possible cluster areas such as the Brighton Centre and hotels that are in a close enough proximity to serve as anchor loads.

Sayed Ahmed (SA) introduced himself as a Consultant with Arup and told the panel that the RE market changes over the last 10-15 years have been largely driven by the introduction of policy mechanisms to help support the funding of renewable technologies. He believed that local authorities were critical to delivering the national and European RE carbon reduction targets. He felt that it was vital if local authorities were to set out carbon reduction plans and targets for their areas that they look at all areas of mitigation, weighing up the best - most cost effective - opportunities for reducing emissions (carbon abatement costs). In general their first focus should be on energy efficiency solutions followed by consideration of RE and other decentralised energy systems.

He believed that gas CHP had a future in urban areas of high heat density as a transitional carbon reduction technology. The use of gas CHP could help deliver heat networks which in turn could then be used for renewable energy options as they became more widely available.

When he worked in the GLA, their hierarchy was to:

- Reduce energy
- Use low carbon technology – consumers need to understand how much CO₂ is used by different technologies
- Increase use of RE

This approach was known as ‘be lean, be clean, be green’.

He believed that a council should become involved in RE to:

- Reduce CO₂
- Increase energy security
- Become a player in the energy market as Ofgem have predicted that energy prices are expected to increase by 20% or more over the next decade

Ways of funding RE

These included:

- Sophisticated energy procurement processes would be able to deliver energy savings to councils. With political support, these savings could be put into a pot to fund energy efficiency and renewable energy measures.
- Working with Salix to install energy efficiency measures and similarly use the savings to set up funds for RE.
- Allowable Solutions which would lead to zero carbon developments – allows for planning authorities to accept funds from developers to support the development of carbon mitigation measures elsewhere in the local authority area. Similar revenue raising powers for district heating are allowed in the new Community Infrastructure Levy (CIL) programme
- Local authorities could also work with Partnership for Renewables (PfR) to help unlock renewable energy opportunities in buildings and land they own

Local authorities also needed to be considering carbon reduction opportunities in the longer term. For example, undertaking heat mapping to determine how an area wide DH scheme could be gradually built up over a period of say, 10 years rather than just a series of smaller building based heat networks.

The range of technology options can be confusing and additionally the cost-effectiveness of these options is heavily dependent on the subsidies available. The majority of RE schemes which have come forward are as a result of funding schemes introduced either at the national or local level. 2010 has seen the most dramatic growth of smaller scale RE systems as result of the introduction of the Feed in Tariffs (FITs). Since April 2010 there has been a 10 fold increase in PV installations when compared to the previous year.

As a result of the FITs – and also the soon to be introduced RHI - other technology options should be increasingly available to local authorities. The use of anaerobic digestion and biomass heating technologies has significantly expanded in a number of other EU countries.

However, there are likely to be limitations in their use in urban areas, especially in relation to the use of large numbers of individual biomass boilers in cities due to air pollution concerns. However biomass use could be enhanced through the use of heat networks and larger heat/CHP generation plants which could utilise the state of the art abatement equipment. To achieve a significant reduction in emissions. Brighton & Hove will need a range of technologies across the city. Investment in such options could be kick started by a number of available funding programmes. These could include:

- The Carbon Emissions target - that will present opportunities for funding. Allowable solutions- that would lead to zero carbon developments.
- The Community Infrastructure Levy (CIL) <http://www.pas.gov.uk/pas/core/page.do?pageld=122677> – a requirement similar to s106 - could be put on developers and used for connecting to DH schemes
- Energy from waste was likely to become a key opportunity, but there are likely to be significant planning difficulties.

He felt that the barriers to RE had shifted over time. FIT was now a game changer and would increase microgeneration. There were big opportunities for schemes up to 5Mwe under FIT rules, but despite the significant funding available, these larger schemes would still be difficult to develop.

It was essential for local authorities to build up good relationships with distribution network operators (DNOs), as they could see CHP or RE systems as a potential difficulty in relation to their duty to manage the local electricity supply network and hence may not help to get such schemes on the system. The Low Carbon Network Fund (LCNF) had been established to enhance innovation. This pot of £500m, over the period 2010-2015 was to look at innovative ways of supporting investment in local networks. The council should explore opportunities with their local DNO under the LCNF.

Q: I am struck by your emphasis on opportunities, how important is leadership?

SA: There is a need for local authorities to become nimble in this field and look at the skills they need, including the ability to work with developers.

Local authorities who lead in this area have all had strong political leadership which has:

- Allowed a period of time for opportunities to grow and for projects to succeed e.g. planning process
- Given clear leadership and confidence to developers
- Used the learning from early projects to roll out further ones

Q: This is an important area, but not a traditional one for the council. How can the staff and leaders be upskilled to understand how to deal with what is a big business?

SA: Some authorities such as Southampton, Sheffield and Aberdeen have those skills now and are sharing best practice. Local authorities can now get 3 days of free consultancy from the Energy Savings Trust (EST), from Michael King. This area may seem new to councils, but 100 years ago energy supply was an area of their responsibility - before the National Grid. Now central government want to see councils taking a role in both local and low carbon grids.

ARUP was working with EST on a low carbon strategy – which aimed to help authorities understand where these opportunities are.

Q: There is not much industry in B&H, would this make it harder?

It is likely to be more piecemeal, but communal heating can be introduced to high density areas. Other technologies would include ground source heat pumps and biomass heating systems.

Jae Mather introduced himself as the Director of Sustainability at the Carbon Free Group (CFG), which was a private company specialising in low carbon solutions.

He showed the Panel some slides on the developing technology of renewable energy. Then he described an example of St Margaret's at Cliffe who had looked at what it would take to power their village. The technology that seemed to make sense was large scale wind which would provide a reasonable return using Renewables Obligation Certificates (ROCs) see <http://www.ofgem.gov.uk/Sustainability/Environment/RenewablObl/Pages/RenewablObl.aspx>. However the community chose electric biomass because it did not like large scale wind. CHP did not make sense either in this community.

This had been assessed by the Building Research Establishment (BRE) and DECC as one of the best examples of a community energy project, but they have needed to seek private finance. Now have 3 financiers lined up, but need the first £0.5m. They would also like to burn waste wood, as at the moment 35,000 tonnes of wood was being incinerated by Kent County Council. This scheme could make a lot of money. The aim would be to then return a % of the profits to people who live in the community and set up a Community Interest Company. Another scheme they were considering was the anaerobic digestion of food waste which was currently being landfilled and using a biogas vehicle to collect the food waste. They were also looking at voltage optimisation in the village and want to work to a 10-12% fuel reduction in every building. This is not being done with OFGEM and EDF were not interested, because of the 10% reduction in their income.

His key point would be that if you do a project right it does not cost anything and makes money.

Jae had worked with all forms of RE technologies because of the focus on finding the best for each place. However Photovoltaic Thermal (PVT) was growing like wildfire because of the 9 year return. This form of technology was very new and only supplied by CFG and Newform Energy (the sister company). It was Microgeneration Certification Scheme (MCS) certified and as such qualifies for both Fit and RHI income. When it was combined with a special water sourced heat pump (WSHP), could offer a complete off gas grid year round heating solution that was zero carbon with the addition of renewable electricity.

He felt that the business case was always the best way to kickstart RE projects, including:

- Income stream
- Carbon offsets

He felt that the biggest barrier to RE was lack of vision. The UK was one of the most risk averse nations in the world. But this had to be done to meet European targets and respond to out of control oil prices and peak oil.

Q: Despite the aversion to risks, there does seem to be significant paybacks for such projects. How can you enthuse people about such projects?

JM: Based on my local authority background, I would recommend aiming high which could then see the project get marginalised to a medium size. He felt that the UK was ignoring the RE work being done in Europe. Kirklees was a great example of carrying out a large scale project. They were able to retrofit 10,000 homes after putting £3 on the Council Tax.

Q: What does voltage optimisation mean?

In the UK electricity is transmitted down power lines at 240v, in reality this figure fluctuates between 240v – 250v. Up to 12.5% of energy is lost through heat, vibration and harmonics. This figure is lower in Europe. By stepping down the voltage to 209v residents can expect to save up to 10% on their energy bills as a result of greater energy efficiency.

Energy companies have been reluctant to step down the voltage themselves. To combat this problem voltage optimisers can be fitted within the local authority boundaries. These can be installed near transformer stations and result in greater energy savings.

Q: Given your local authority experience, do you think we should employ a specific officer on this issue. Do you think we will be getting the right advice or will we need to buy this in?

JM: This kind of knowledge usually has to be bought in, due to the ever changing knowledge needed. If someone is good they will leave and go and work in a private organisation e.g. Arup. However I do know that you have some very skilled people in B&H

10. DATES OF FUTURE MEETINGS

11. A.O.B

The meeting concluded at 12.00 noon

APPENDIX 4

BRIGHTON & HOVE CITY COUNCIL

SCRUTINY PANEL ON RENEWABLE ENERGY POTENTIAL

10.00am 7 FEBRUARY 2011

FRIENDS MEETING HOUSE

MINUTES

Present: Dr Adrian Smith (Chair), Councillors Morgan, Watkins and West

Also in attendance: Thurstan Crockett (Head of Sustainability and Environmental Policy), Tom Hook (Head of Scrutiny) and Karen Amsden (Scrutiny Officer)

12. PROCEDURAL BUSINESS

No declarations.

No party whip.

13. MINUTES OF THE PREVIOUS MEETING

The minutes of the previous meeting were approved.

14. CHAIRMAN'S COMMUNICATIONS

Due to pressure of time, the Chairman just wanted to welcome everyone to the 3rd meeting of the Panel. They were looking forward to learning valuable lessons from those who had sought to develop renewable energy in the city.

15. WITNESSES

Peter Davies (PD) introduced himself as the Development Director, Shoreham Port Authority. He told the Panel that the Port had a 250 year history, including that of power generation – including an early power station in the 1800s. The current power station had been built 10 years ago by Scottish Power. Shoreham was a Trust Port set up by Parliament and the Port Authority was run by a Board, which meant that no profits could be made and any surplus had to be put back into the Port. It was a relatively small regional port, which dealt with cargos for mainly customers in Sussex, Hampshire and Surrey. It dealt with about 2m tonnes per annum and covered a large area 3.5 miles long.

The Port had adopted a Masterplan which can be found at <http://www.shoreham-port.co.uk/Masterplan> and Renewable Energy (RE) was part of that plan. It was anticipated that there would be a 25% growth in throughput in the next 15/20 years, which would boost the local economy and jobs market.

They hoped to take advantage of the planned offshore wind farm (Rampion) and the Port was committed to going green. Examples included:

- considering this issue when renewing waste contracts in April 2011
- examining their own energy use
- working on a travel plan in conjunction with Brighton & Hove City Council (BHCC)

The Port Authority only owned 70% of the Port and so needed to work with private organisations on these greening proposals.

Ports were a sustainable means of transporting local products – for example, shipping grain to Scotland to make porridge oats. However the Port did take in timber from Scandinavia. They were in the process of learning about RE and were keen to be involved in projects in this sector. They were used to handling major projects e.g. waste water pipe at Peacehaven.

One big opportunity was the 450,000 sq ft of warehousing which could e.g. be fitted with solar panels. There were also significant chances for private investment in both new buildings and retrofitting. They were building a steel processing plant for £10m and renewable energy would be a key part of this project (<http://www.shoreham-port.co.uk/Latest-News/CONSTRUCTION-OF-STEEL-PROCESSING-PLANT-GETS-UNDERWAY-AT-THE-PORT>). They had won a contract with Eddie Stobart to transport biomass to Germany and Sweden for up to 10 years. If biomass plants were to be built in the UK, then the Port could both import and export biomass.

Edgeley Green Power wanted to come to Shoreham, in order to transport the oil it would need to fuel their planned biofuel power plant. It was hoped that the generation of power would happen by the end of next year.

There were real opportunities for solar panels because there was so much roof space. This could be to the value of £6m in the first phase of the development. The Port Authority could not afford to make this investment and was looking for a partner to finance the investment. They were examining the possibility of doing this through a community interest company rather than a purely commercial arrangement.

The Authority also believed that the site could provide opportunities for wind turbines, as it was a really good location. A planning application had been refused in the mid-90s and so they were fearful of getting their fingers burnt again. Due to the proximity of people living near the site, the turbines would need to be medium sized.

If one wanted to compare the work of this port, compared to e.g. Blyth and Lowestoft, it was important to remember that no two ports are the same. Blyth and Lowestoft had the advantage of being in an earlier round of development, whereas Shoreham is part of Round 3. While Blyth and Lowestoft was large enough to get involved in construction, there were not the same opportunities at Shoreham, although they could run demo projects.

PortZED (<http://www.zedfactory.com/portzed.html>) was primarily a housing led project. Bill Dunster, was the principal architect, and the project involved zero carbon housing, office and retail space. They had already potentially gained funding (previously known as Eco Town funding) which would provide around £3m for regeneration and still leave money for Port ZED, if they gained planning permission – which was going ahead at the moment.

This project would present real opportunities for the Port and developments next to it and could result in 2,000 homes and 4,000 new jobs in the area. This was significantly less than had been expected 3 years ago, but the opportunities it would bring included district heating (DH) – although the stock would be quite spread out. For example the Edgeley Power Station could be used in some way to heat businesses. At present the sea is being heated up by the power produced in Shoreham, which could be employed for good. However, one would need a sophisticated system to link it up and provide constant heat – the Authority would need a 3rd Party to come in and do this.

In summary, it was an exciting time at the beginning of a process and the Authority was confident that it could make a difference to the area.

Questions to Peter Davies

Q: What model do you think should be established to deliver RE energy projects in the port?

PD: Solar Panels could be installed as a community project. The Authority could provide the roof spaces and it could be the role of a council to pull the right people together to make this project happen. It is not the core business of the Authority and it takes time to win people over. Brighton & Hove City Council (BHCC) could take on the role of ‘selling’ different kinds of technology, such as wind turbines, to the community. If the community had a stake in such a project, it was more likely to be a wonderful project. However, due to the funding opportunities, this needed to happen in the next few months.

Q: Have you undertaken any particular testing e.g. to see how PV panels would work on a sea fronting site?

PD: Seagulls are an obvious problem in this location.

Howard Johns (HJ): The key factor is which material is used in construction. The location may affect the design of the system, but is not an insurmountable problem. Solar PV has been put on Shoreham Beach.

Q: Would it be possible to temporarily place PV panels on land which is not currently being used?

PD: When putting solar panels on roofs, one can incur increased costs if need to strengthen the roof. However there is very little land in the port area that could be let out on such contracts. However there are some small areas of land which are no good to us, or land a long the top of the beaches which could be used to put up turbines. The possibility of putting panels on poles had been looked at, however there was concern about possible vandalism.

HJ: If one puts panels on roofs there is not much extra cost. But if one was to erect panels temporarily one would lose the opportunity to earn a 25 year income. One would not want to erect panels in a place where the possible vandals could reach them.

Q: There appear to be a lot of opportunities for RE, but realise it is away from the core business of the Port. What kind of organisation do you think would be most useful for delivering RE e.g. community energy?

PD: The Authority has an open mind. Some purely private organisations have made attractive offers, however as they were a community port – they could be interested in a community based group.

Q: It had been suggested by other witnesses that the Port Authority could speak to the Brighton Energy Co-op and OVESCO.

Q: Is there sufficient demand in a 50 mile radius to sustain the Port, or will you have to extend the area you serve?

PD: As part of the Master Plan process, they were able to identify a long list of business opportunities. These could come from organisations who currently use other ports which are further away e.g. Hull. The Port is popular because it has invested in its infrastructure. Because it is a Trust Port, it considers what is best for the area and not always on strictly commercial lines.

Thurstan Crockett (TC): To place this in a planning context, Shoreham Port was identified in the Core Strategy as a large opportunity for RE. There is a history of redevelopment in the areas. The previous vision for the port relied on a £200m+ link road, which was not fundable.

Q: One can see how important the Port is – how can BHCC enable your work?

PD: We are not sure how, but we do need the assistance and need to get on with it quickly. Help could include guidance, putting together the different interest groups and helping it to be seen as a community project. Other assistance could include:

- help with establishing a DH scheme
- Signing people up to projects
- Expertise in the local authority
- Skills that could assist in the process as EoN applies for consent in the next 12-18 months
- Supply chain and jobs

Q: Are you getting the same level of co-operation from the other local authorities – West Sussex and Adur?

PD: They had all been working together to concentrate on getting the planning right, but had not yet been able to get on with the projects on the ground. So now wanted to get on with it and make it happen. For this they needed the help of the councils, both in hand holding and offering practical guidance e.g. who are good suppliers/installers and technicians?

Dr Phil Webber (PW) introduced himself (using Skype) as the Head of the Environment Unit at Kirklees Council. He felt that RE had not been the priority for his council. Instead their priorities had been to improve housing conditions, including insulation, and reduce CO₂. Their biggest programme had been Warmzone, which had undertaken 65,000 free home insulation measures. This had included a programme to improve boilers and a boiler scrappage scheme. After undertaking these energy efficiency works, the council saw their role as helping to increase the % of RE in the UK.

They had managed to obtain a small grant from the Department for Energy and Climate Change (DECC) to install 50 Solar PV systems on terraced properties. The council were really using Solar PV as a way into this area. They would be using the Feed in Tariff (FIT) income to establish and maintain a Community Fund. This work was also seen as a lever into getting the community e.g. to increase their level of recycling. The Council was also providing energy advice, as sometimes low income households had extremely high energy bills.

Kirklees was looking at the ways of exploiting FIT. They were planning to put in £6m to install solar on 5,000 local authority homes and then the income from FIT would pay back the costs over 10 years. It was also possible to fund such projects if you were able to access loans at a reasonable rate. For example, Public Boards were able to offer loans at a reasonable level but they still had to deal with the issue of maintenance costs.

The council had found there were big capacity issues due to insufficient certified installers. However, this was an opportunity to combat the recession. There were big opportunities for local authorities to insist on local suppliers, local workforce and training opportunities. If one spends £1 on insulation, one got a lot more CO₂ savings than from RE – however RE brought good employment opportunities. This was why the council needed to do insulation first, but there was the worry that improving the insulation of the home just resulted in a warmer home, rather than achieving CO₂ savings. With RE, consumers could see the energy being generated, which may change their patterns of energy use. There was also a lack of capacity when it came to insulating homes. To deliver their programme required them to train and pull in crews from across the UK to deliver the volume they needed, due to the high take up rate. For this kind of volume needed 10,000s or 100,000s of installers.

When it came to partnerships, the key issue was working on existing housing stock. The council had found that the District Network Operator (DNO) was on board, and had to take notice of the issues due to the legislation. In their experience the community was interested in RE if the price was right. The key task for the council was to put together the business case, where all the participants gained some benefit e.g. the FIT income was going to a community fund and the home occupiers were receiving the energy. They had focussed on the poorest sectors of the community. A distinction had been made between those who could, and would, pay for renewable energy and those in poverty. To this end the council was going to use £6m from the Housing Revenue Account (HRA) to fund further RE work. There were other funding models available, such as the companies who will install panels and then take the FIT income for a certain period.

The main advice that Kirklees would give to other councils, was to prepare for the Green New Deal. This would include how to contact people and persuade them about the range of opportunities which could be out there for RE. People needed to be persuaded about the different technologies, which was more difficult if the technology was new or more disruptive to the community. One needed to sell the payback period of RE technologies. Reliable surveys of properties were also needed and getting good advice e.g. on which projects to pursue. It was taken as a given that everyone should insulate their homes, but when deciding on which RE technologies would suit people – this would depend on individual preference e.g. Solar PV or Thermal.

The council had not had a positive experience with Biomass.

Questions to Phil Webber

Q: Why were you undertaking the solar panels project now and why were you using £6m from the HRA? If you are like BHCC, our housing stock is often in a poor condition and tenants may prefer to have a new kitchen.

PW: Kirklees is in exactly the same situation regarding the state of its housing stock, but solar panels will generate income and then the money could be used later to improve kitchens. The council is also still in a situation where it can offer micro-loans and revolving loans towards improving kitchens and bathrooms. This is a big issue, because the funding for adaptations has gone.

Q: Do you think when trying to introduce such large programmes, should the council take a lead or use a 3rd party? Is it best to introduce blanket measures or target specific areas?

PW: The 65,000 insulation measures have meant that 65% of the housing stock now has cavity wall insulation. With Solar PV, the council was targeting its own properties, hard to treat homes and people in fuel poverty. Where properties are owned by the council, then it is right that they should take the lead in improving them. In relation to the private sector, it was the council's role to act as the independent checker of what is going on and getting a good price – because there are a number of companies offering bad prices and systems. Such companies gave RE a bad name, so quality installers were needed – and the local authority had a role in checking.

With the Green New Deal, councils would be needed in the role of 'honest broker'. While 3rd parties could be quicker, local authorities had many of the needed skills in-house, e.g. their legal department.

Q: Having established that reducing CO₂ was your policy driver and an outcome has been building a relationship with your community, what do you see as the next steps? How will the FITs be used to set up a community fund?

PW: The Community Fund income from FITs will be used to carry out general improvements in an area. These would need to be the collective decision of the local authority, the community and any 3rd parties. One of the areas of improvement that are most sought after are play area improvements. The process has to be fair, otherwise it will be divisive. It will be a challenge to see how this project works out. They have put £500,000 into the project and the work is being done on a continuous bank of 60 terraced properties. It is anticipated that it will generate £20,000 p.a. income. The process needs to be open and sensible.

Kirklees Council has a reputation and has been seen to deliver projects which were free. The relationship with the community is very important. The council had to operate in a commercial way e.g. using billboards, appearing on the radio to promote issues/schemes and put up information in libraries. They had done a lot of work to brand this issue and address indifference. They feel that this has had an impact on the way companies, such as British Gas, promote this issue.

Q: There are a lot of national programmes such as the Low Carbon Community Programme and the anticipated Green New Deal, which require a lot of dynamism to implement in the local

area. How have you managed this in Kirklees, has it been the role of the Environment Unit and/or the political leadership?

PW: Recently the number of the staff in the Environment Team had been reduced from 20 to 15. There was also a lot of cross-departmental working e.g. Housing and community workers. They had brought together all the people who needed to be involved to make it work. There had been a high level of need for capacity and skills in the Environment Unit. For example, 6 people had been working on this full-time dealing with RE related issues such as the 150 responses they had received to a tendering exercise. One would need staff such as legal and procurement people. It was not a straight forward process e.g. setting up a Supply and Fit contract. Due to government funding, they worked closely with DECC, but this meant that many people visited them to see what the council was doing. Kirklees were happy to offer advice to other local authorities.

Howard Johns (HJ) introduced himself as the Managing Director of Southern Solar, the Chairman of the Solar Trade Association and the founder of OVESCO Ltd.

He told the Panel that today the Government had announced their intention to review FITs immediately http://www.decc.gov.uk/en/content/cms/news/pn11_010/pn11_010.aspx The Government were concerned that there was too much uptake of the scheme, which was a real kick in the teeth. This review would affect all projects over 50kW. This would be a complete nightmare for the solar industry. Southern Solar were currently working on the site of a 300kW project. The sector had only had FIT for 10 months, resulting in 15,000 installations. The reason given for the review, was to prevent the development of solar farms.

He had set up Southern Solar 9 years ago and the company had grown to the size where it needed 6 offices including in Lewes, London and South Wales. The company was installing solar on 15 homes per week and 300kW was the size of their largest project. They worked with a number of local authorities and installed both Solar thermal and PV. They used to offer a full range of technologies, such as wind turbines. However around 90% of homes are suitable for solar, compared to 1 in 1,000 for a wind turbine. They felt that small wind turbines were not worthwhile for them, unless it was in the middle of the countryside. These were the reasons why their focus was on Solar PV and thermal. The biggest installation they have worked on in Brighton & Hove (B&H) was at Portslade School.

The UK's PV market represented 50MW this year, up from 10MW last year. However in Germany the sector is 8,000MW. The biggest market was China, also the largest consumer of PV. The UK was hemmed in by the politics of the issue. The sector was operating in a situation where 12 months ago it had not known what were the details of the FIT scheme, and now faced a review of the scheme 10 months later rather than in 24 months. This process had worked by stimulating the market by taking it out of taxation, which was also going to be done for the Renewable Heat Incentive (RHI), and the scheme then funded by a levy on bills. However as a result of the Spending Review, these schemes would be part of the taxation process and a budget would be set up for them. This would mean that as soon as too much money was being spent in this area, if the take up was too good, then the expenditure would need to be reduced. This review of FIT had been announced even though not as much RE had been done in the UK as expected.

It seemed that every local authority was saying it planned to invest £10m in this sector, and now a lot of projects will fail. Councillors should lobby their MP because PV creates jobs. It was

projected that it would create 17,000 jobs this year. The number of companies working with PV has grown from 500 to 1,200 in a year. This had raised issues of quality and ethics. But the right stimulus is needed, or this number of companies could fall.

He had first tried to set up a community energy company in B&H, but then went on to found OVESCO which was about to go public with its share issue. But the % of its projects were over 100kW, so their future could be affected by this review of FITs.

Q: Is this review of FITs just a sensible reaction to fears over solar farms?

HJ: There has been campaigning and pressure put on politicians about this issue. He had worked with the council, including Sustainability and Architects, on RE issues. In his experience there had been a lot of planning in the city, but not masses of action. He was surprised by how little uptake there had been of this technology in the town, compared to Woking (who had installed 10% of all PV to date) and Kirklees. He attributed this to the visionary leadership of these councils. He believed that councillors in this city needed to get together and decide to do it, which was what Kirklees did in the early '90s.

The possibilities were huge including the council's housing stock and its property portfolio. Both of which could be used to generate solar heat and energy. The council could lead schemes which would increase the credibility of the sector in the city. If they took measures on their stock, like Kirklees, this would be well received by the community and increase the amount of microgeneration in the city.

Renewable energy was caught up in the political process and there was still to be an announcement on the Green New Deal details – which were not likely to be known until the next year.

The use of Solar Thermal in a Scottish project had reduced households' heating bills by 30%. Such projects were pretty maintenance free and offered huge opportunities, for example at the King Alfred.

Renewable energy projects would decrease the amount of gas bought from Russia and oil bought from Saudi Arabia. This would be money that would remain within that community. The scale of the RE programmes in Germany were because they realised that it kept money in the country.

It would be possible to make B&H a 'hub' for RE. Kirklees were a 'hub' because they had just got on with the projects. It would be best to start with small projects, go and actually do them and then see if they work. In their experience, people find out that they like having RE installed on their properties and often a year later become an evangelist for it. Such projects would result in inhabitants changing their attitude to energy and increasing their energy saving. This was unlike insulation which did not change behaviour and often resulted in people turning their heating up.

He did not think there would be a problem with the grid, although this could be possible for the port. The DNO in the area – EDF – were pretty co-operative and one could normally get an answer from them.

He did not think there were massive barriers in the city, but one of the key challenges were the planning hoops they had experienced 9 years ago.

He had been involved with both OVESCO and the Brighton Energy Co-op and talked about leasing roof space from BHCC. However, this had not been met with huge enthusiasm from the council. What was needed in the council was leadership and risk taking. But it could happen in the city, because it was happening elsewhere.

Questions to Howard Johns

Q: At the last Panel meeting we heard about Photo-Voltaic Thermal (PVT) technology – is there an argument for waiting for the technology to be right to invest, will there be an advance which is worth waiting for?

HJ: PV is in a solid state. The panels of today are a 1/3 of the cost and produce twice the output as one bought 9 years ago. There is no major breakthrough moment yet – did not believe that PVT was this breakthrough. At some time grid parity will be achieved, in about 5 years, when:

cost of energy from a power station = cost from renewable energy

Q: If the FIT is removed, where will this leave PV? How can we plan our strategy now?

HJ: The outlook will be bleak in the UK if FIT is removed.

Adrian Smith (AS): Kirklees kick started their programme before PV, so one needs to consider how to do this kind of programme without Governmental support.

HJ: We need both the FIT and microgeneration. I do not have an answer on how to plan without FIT.

Q: This issue has been politically pushed in Kirklees? Do you think a 3^d party is needed to help? Especially considering that you have already met the leaders of BHCC?

HJ: Silence has been the main reaction from BHCC. I had already discussed the possibility of an ESCo with the Head of Sustainability. This was because the ESCo established in Woking, Thamesway ESCo, reduced by 40% the energy costs of their HQ which enabled them to invest in further projects. I met with a lukewarm reaction when I told various people in the council about ESCos. There is a need for political leadership. It is a complex area because there is not an obvious procurement route, which makes people cautious. The difficulty community groups face is that they do not have a track record or investment credibility. This means that their projects are treated as laughable, and they find it difficult to make them stack up.

Ross Gilbert (RG) told the Panel that he was the Director of Quoin Estates and Developments. In July 2009 he had approached BHCC about setting up a Community Energy Centre in Portslade. He had produced a matrix which had been distributed to panel members, which recorded what an extremely frustrating process this had been. Mr Gilbert had been prepared to put up the £20,000 needed for the future development of as a co-op for both PV and a wind turbine. So it would have been a self-funded project. It had been a long process and involved a lot of work, but he had been hopeful of taking the project forward. For example,

this process had been slowed down by a 3 month wait for the replacement of a cabinet member.

He had found dealing with the council extremely frustrating, for example having to explain what a KW was. He had been told that the authority still supported the process. Then in October 2010, he had received a rejection letter out of the blue, having being told that the organisation wished to concentrate on PV. The model that he had developed would have involved a co-op which would have given an income to the council. This income could have been used to establish the energy information centre, with the council retaining the ownership of the land the installation was on. This was a community based scheme and would have needed the support of BHCC. In Kirklees they had a let's see how it works attitude, which does not seem to be here in BHCC.

One of the reasons given by the council for stepping back, was that it was going to carry out its own desktop analysis of wind sites in the new year. He was told that the sites were not yet identified and it took 3 emails to receive back information on the council's progress. He felt that BHCC lacked ambition when it came to wind energy, even though this technology could produce large amounts of energy. He had not been the first person to try and use on-shore wind in the city.

In contrast when he had contact with the Planning Department regarding putting up solar PV panels, he had had a very good experience with the process being sorted out in 12 weeks. Ross Gilbert had also a good experience with the council when installing solar thermal. He felt that BHCC should have enabled his organisation, by letting them get further with the project.

He had not yet experienced capacity issues yet. He felt that there was good competition in the field of Solar PV. With on-shore wind, there was a larger national issue as there were only 7 approved producers under the MicroCertificationScheme (MCS) programme. The largest of these products was 12kW.

HJ: For larger wind systems, the accreditation happened afterwards.

Ross Gilbert felt that there was a huge opportunity to make this city a 'hub' for RE. There were a large number of targets and papers on issues, but a lack of action. He felt that the council's role should include:

- enabling networking
- having the right knowledge and skill set
- having the desire to see projects happen

Questions to Ross Gilbert

Q: It was important to acknowledge the experiences of Ross Gilbert and was upset to hear about them. There seems to be a thread of council officers and the political leaders in the city needing a willingness to succeed and a vision for RE.

RG: A lot of market research had shown that there was a poor public image of wind energy. However there had been 84-85% public approval of the plans at Glyndebourne. Therefore the issue should not be pre-judged and it should be recognised that the planning application process takes up a lot of resources.

Q: A lot of surveys have shown reduced levels of opposition after wind farms have been constructed. But what would be the perfect process? What are the most important approaches that a local authority could take?

RG: In-house expertise on the subject or willingness to partner with another organisation and let out roof space. Like the Port, this was not central to BHCC's business – so why not allow partners to get on with it. Why not just do it once?

Daren Howarth (DH) runs CLEVEL and told the Panel that he was a consultant who was currently working with one of the big 6 energy companies. He had installed a wind turbine in Islingwood Road in the city as part of the 'try things out' approach. He had found the turbine only generated significant power in higher wind speeds, which proved to be a problem on his particular house because of the vibration. He had issues with both the technology and installation of that particular turbine and had to turn it off in the end. He was aware that revised versions were being worked on and integrated with solar.

The council had given him full planning permission to install solar panels on the Earth and Stars pub, but it had been a very slow process. The Green New Deal could mean the growth of external insulation. Cladding houses could bring real carbon and money savings, but could lead to huge planning issues. It would be good if BHCC could start to prepare for this, pre-empt the problems and fast track such cases.

Monitoring of schemes had been a big issue with BHCC, leading him to offer to do it himself. For example noise had been a big issue for planning, and he did not feel that this monitoring was done by BHCC. Monitoring had been done well with other projects he had initiated - both the Earthship and Groundhouse – he had lived in the latter building for 1.5 years and got to test how well the building worked. He had put his own money into Groundhouse and got to try out different technologies, which had resulted in a beautiful house which had been featured on the Grand Designs programme. The monitoring he had carried out had included checking that the building was a good temperature all year round without a heating system.

His experiences showed, using interesting configurations of technology e.g. using solar thermal for space heating which was then linked to a massive tank, that there were big opportunities for the city. These kinds of technologies/configurations were now standard in Germany. Another example was roof integrated technology, which looked like a nice tiled roof. This could be a planning default, which could then be plugged into central heating.

In order to encourage RE in the city, Daren wanted to know whether the council had in its teams enough people who could drive practical action and navigate through this field.

Questions to Daren Howarth

Q: It is important to try out and tailor each house to specific needs? As so far we have been talking about off-the-shelf projects. For example, are homes being written off because of the angle of their roofs?

HJ: Only north facing roofs should be written off for solar. In Scandinavia they put solar thermal on the west face of walls and match to space heating. One could reclad the south face of tower blocks. An ESCo is needed to run such a project, because one would have to put in a District Heating System instead of individual boilers. This would be a complex project and

would need up front investment. BHCC could build a model which could be replicated across the city.

Q: The Earthship was the first of your buildings and I remember that when sitting on the Committee, that the Planning Officers were against it. Did this feel like a big battle?

DH: It was the first earthship in the country and there were a lot of issues because it was a Greenfield site. Considering that, the council was very supportive and enabled the development.

Q: As a pioneer, do you feel that such projects instil confidence?

DH: If you build an unusual building then people can come and see, then they can be inspired to do things themselves, taking some of the aspects of the project back with them.

TC: Just to add that the Earthship has been monitored by the Low Carbon Trust and University of Brighton. It has been found to stay c. 18^o-21^o all year round.

Q: Why do you think that B&H has not done better so far with RE? We have heard about the need for political leadership, but is there the interest in engineers? What about the need for links with the Universities?

HJ: Most of the Research & Development (R&D) has been done in Germany, what needs sorting out in the UK is the politics.

Q: How could the Universities help to build up political support for this sector?

DH: The University of Brighton was involved in monitoring the Earthship and now lots of people want to do the same thing. But a lot of the aspects of the project provide opportunities for further innovation and research. For example, when demolishing a building to grind it up and use it to help build heavy thermal mass walls from rubble, using gabions (steel cages). These are engineering issues and so links with Engineering departments in the Universities would be useful.

Q: Do you not think that developers are driven to use the cheapest materials?

HJ: The Code for Sustainable Homes sets the key planning thresholds for the city. This code normally kicks in after 10 homes.

TC: There is a 9 units threshold.

Q: How could there be a link-up between Universities and training courses needed for this sector?

HJ: There are masses of such courses all over the country, but need the industry to be there to keep them in jobs. Do not see a capacity issue.

Helmut Lusser (HL) introduced himself as the Chair of the Hove Civic Society (HCS). This was one of 3 overarching Civic Societies in the City. It was not a residents' association, and was set up 50 years ago to look after and encourage high standards in architecture and

planning. They had focussed on physical appearance and were increasingly looking at the function of buildings. As part of this shift, were looking at RE to consider how a building performed - as well as how it looked. They have acted as a constituent group on conservation issues/applications. They had closely examined council policies, such as dwelling standards. The Society believed that the BHCC policy for local authority housing standards should be extended to the private sector housing in the City and were lobbying the council on this issue.

The Society had set up the Renewables Infrastructure Group (RIG) to consider such issues. Other campaigns included the maintaining Victorian street heritage campaign, in terms of sustainability and biodiversity. The Society also wished to see more public art in Hove. The Society ran an annual lecture series and their focus would be on RE both this year and the next. The Group felt that this debate about RE had not yet reached members in the city. There was a need for a big publicity campaign to convince citizens. The focus of RIG is to look at how it can push the RE process, using its lobbying power and standing in the community.

It was felt that B&H should be the Solar City of the UK, because we are not using our sun as we should be. Their written evidence outlined their programme for 2011 and their initial strategy. The Society was keen to help knit together different interest together and was trying to attract Lottery Funding to carry out schemes such as 'Hard to reach homes' in certain sectors of Hove. Such homes faced significant numbers of obstacles when trying to treat them.

The Society had started to monitor planning applications for their ability to improve their RE capacity. The intention was to look at them for 6 months and then make representations to BHCC about the major opportunities in this sector. They were also keen to convince the other Societies in the city, especially Brighton Society and the Regency Society, about the importance of this sector.

The Society felt that it was important for the big schemes to succeed e.g. Rampion and Edgeley Green Power Station (which they were interested in even though it was not in the city) and had written a letter of support for PortZED.

As a former Town Planner, he believed that one could not always assume that a Planning Department would learn from exemplar projects. He felt that a project such as PortZED could either be a catalyst or fall flat on its face.

He found it heartbreaking that one could not deal with the power being produced by the Shoreham power station. This was producing heat energy of the same scale as the Rampion project would, and one needed to be able to harness this kind of heat loss. He would like to see BHCC commission some serious consultancy on this issue.

He believed that in Hove the geography made the installation of RE on individual houses, less than optimal. This area needed careful treatment and work needed to be done on hard to treat homes. BHCC could offer advice and information to residents and help them procure good quality installations.

Cumulative improvements were needed to planning applications. He thought one should consider how BHCC could use the Planning process to drive up standards, and potentially use the Localism Bill to achieve this. It was up to BHCC to pick up this issue and run with it.

HCS consider RE a non-party political issue and of keen concern to the city. He expressed concern that the panel hearing the evidence was not made up of representatives from all the major parties.

John Kapp (JK), A Member of Hove Civic Society and secretary of the Renewables Infrastructure Group, then highlighted the 5 key points they wanted to raise:

1. Renewables could be developed in the city by setting a target of making all energy (240MW) renewable and all vehicles electric by 2020 (a target from Al Gore)
2. Setting a target of making the city 'Brighton Town – Solar City of the UK'
3. The council should procure/initiate a feasibility study of a Combined Heat and Power/District Heating (CHP/DH) scheme to use the waste hot water from Shoreham power station to heat buildings in Brighton and Hove and other coastal towns
4. The council should establish an Energy Advice Centre in the city, as Newcastle and other towns have done
5. Establish an energy forum which is open to all in the city, modelled on the lines of the Brighton Housing Forum

Questions to Helmut Lusser and John Kapp

Q: I appreciate the importance of securing the input of Planning and educating officers. I understand that there are Conservation Advisory Group (CAG) advisors, is there any sustainability representation on planning issues?

TC: There was a one-off sustainability group to advise on the Core Strategy. This was not a permanent set up, but one would need to check with Martin Randall.

Q: A recommendation could be to put a sustainability representative on planning. This would be good practice as this issue needs to be institutionalised and reported on. One needs to collect information on this issue.

16. A.O.B

There was no A.O.B.

The meeting concluded at 12.45pm

APPENDIX 5

BRIGHTON & HOVE CITY COUNCIL

SCRUTINY PANEL ON RENEWABLE ENERGY POTENTIAL

2.00pm 16 FEBRUARY 2011

COMMITTEE ROOM 2, HOVE TOWN HALL

MINUTES

Present: Dr Adrian Smith, Councillor Morgan and Watkins

Others present: Karen Amsden (Scrutiny Officer), Tom Hook (Scrutiny Manager) and Jonathan Barton (Scrutiny Intern)

17. PROCEDURAL BUSINESS

Procedural business

The Chair welcomed everybody and thanked them for coming. This was the fourth panel meeting. Its purpose was to learn what is happening with renewable energy in the city at the moment, where potential lies in the future and what the council will do in the future. One of the things learned from previous meetings was just how distributed the field of renewable energy is and therefore how beneficial it is to have everyone around the same table.

Declarations of interest

There were no declarations of interest.

Apologies

Apologies from Cllr Pete West who was unable to attend.

Approval of minutes

Martin Randall (MR): Page 14 – threshold of homes written as 10 homes corrected to 1 home.
Thurstan Crocket (TC): Mistake made, minutes will be amended.

Other communications

David Watkins (DW): Use of Skype at the previous meeting was a big success.

18. CHAIRMAN'S COMMUNICATIONS

Adrian Smith (AS): The Feed-In Tariff review which was announced last year is significant for certain projects such as solar PV although may not affect all projects.

19. MINUTES OF THE PREVIOUS MEETING

The minutes of the previous meeting were approved.

20. WITNESSES

Thurstan Crocket (TC) - Head of Sustainability and Environmental Policy had provided a written response to the Panel which stated that the Sustainability Team provides specialist consultancy services, working across the council to promote a consistent and practical approach to reducing environmental impacts, and working together with city partners to encourage good practice and wider sustainability benefits.

Key areas of work included:

- Policy: Ensuring sustainability is effectively built in to decision-making, including strategic planning, policy development and implementation; and at all stages of commissioning;
- Performance: Improving environmental and sustainability performance across the council using an Environmental Management System approach, including improving awareness and understanding of potential risks and opportunities;
- Partnership: Supporting the development and implementation of the Brighton & Hove Sustainable Community Strategy, and its work streams, including climate change mitigation and adaptation planning.

The team provided support to the City Sustainability Partnership (CSP), which formed part of the Brighton & Hove Strategic Partnership, as well as the council's Sustainability Cabinet Committee, which met on a regular basis to make decisions or recommendations to Cabinet on sustainability issues that are not the sole responsibility of other Cabinet members.

As Head of Sustainability & Environmental Policy, as well as leading the team, his role included managing and helping the CSP, advising senior managers, the leadership and members, and providing advice and support for policy development work, such as the work of this panel.

Current city policy, position, targets, monitoring and review

Relevant city **policy** and **targets** stemmed from the current Brighton & Hove Sustainable Community Strategy, in a chapter headed Living within environmental limits and a section on tackling climate change:

What we plan to do (extract from that section):

"Achieve, from a 2005 baseline of 5.53 tonnes per capita, a 12% reduction in city CO2 'direct' emissions by 2012/13, a 42% reduction by 2020 and an 80% reduction by 2050...."

...Develop consolidated action around the expansion of sustainable and renewable energy generation. Produce a ('big users') heat map of the city to promote district heating scheme plans, using new developments as a catalyst. Establish an energy service company (or companies) to support local sustainable and affordable energy delivery. Install, and support the widespread installation of new energy generating technologies including supporting plans for a large offshore wind farm off the coast of Sussex, and undertaking feasibility studies for marine (tidal, wave) and wind energy for the city. Identify sites for larger scale sustainable energy facilities through development policies and the Site Allocations Development Plan Document."

The marine studies were now likely to be dropped from any immediate action planning due to strong evidence that there is insufficient wave or tidal resource locally to make investment viable. This strong steer came from the renewables industry itself.

Current council policy was set out in the 2008-11 Corporate Plan:

Under Priority One: Protect the Environment While Growing the Economy:

"We...want to reduce the city's carbon footprint, and play a full part in tackling the international challenge of climate change".

We will have succeeded if, by 2011:

- CO₂ emissions per head and CO₂ emissions from council activities have reduced
- More wind, solar and other sustainable energy is installed locally."

For the council and its own estate, a strategy was established in March 2007 in a Carbon Management Programme Strategy & Implementation Plan. This committed the council to reducing its emissions by 20% from a 2005/6 baseline by April 2012. Under the Plan section "Long-term programmes, policies and projects" there is a paragraph on Renewable Energy in council buildings:

"An investigation into the potential for implementing renewable energy sources for council buildings. This will include reviewing current buildings and investigating the potential to utilise renewable energy resources, as well as working closely with the Architecture and Design Team to ensure that all new builds and refurbishments include renewable energy elements where possible. An initial target of 5% of the council's electricity consumption from its own renewable sources by April 2012."

The average 4% per year emissions reduction aim was also reflected in the council's Local Target L26 for NI185 in the Local Area Agreement with the government, of 12% over three years, from a 2008/9 baseline year. DECC has not yet reported figures for our 2009/10 achievement.

Similarly the LAA target for city-wide carbon emissions was a 12% per capita reduction in CO₂ emissions over 3 years, against a 2005 baseline; the **position** was that the city has achieved about 6%, though there was a two year lag in the availability of this data, so the latest figures are for 2008. This was in line with the national figure for England.

The Leader of the council subsequently committed the council, as one of her 2010 priorities, to signing up to 10:10 and so aiming for a 10 per cent reduction in the council's CO₂ emissions in 2010/11 from a 2009/10 baseline.

None of these targets and action plans had specific renewables actions in them as the emphasis was on demand reduction i.e. energy efficiency, as the priority.

Council officers were currently working on a corporate renewables policy to ensure a consistent approach across the council for its land and buildings.

The city council has developed and implemented an Environmental Management System (EMS) accredited to ISO 14001. The EMS created a framework for managing and reducing the organisation's environmental impacts. The EMS currently covered the Brighton Centre, the Hove Centre, Hove Town Hall and all outdoor events taking place in the city. There were plans to roll out the EMS across the council.

The EMS was guided by [B&HCC Environmental Policy](#). The policy had been signed by both the Leader and Chief Executive of the council and it set out the high level environmental aims of the organisation. The policy specifically committed to the installation of renewable energy systems where they were appropriate and to procuring energy from renewable sources. It was a high level document which covers a wide range of environmental aims and it was not specific about how these aims will be achieved. In order to ensure that its aims were delivered in a co-ordinated way, further policy guidance was required. The Corporate Renewable Energy Policy would provide more detail to those involved in delivering renewable energy projects on how they should be managed.

An important element of an EMS was identifying the activities within the organisation with significant environmental impacts and introducing procedures to manage and reduce them. One of the significant impacts identified for B&HCC was the energy used at all locations. Creating clear and co-ordinated procedures for the introduction of renewable energy installations supports the systematic approach needed to maintain accreditation to the ISO 14001 standard.

Monitoring of the amount of installed renewable energy in the city was reported in City Planning's Annual Monitoring Report; experience has shown that sourcing reliable data for this was a real issue, as planning permission is no longer required for many installations.

Ambitions and leadership

The CSP drove city ambition on carbon reduction and this included renewable energy. This was reflected in its drafting contribution to the Sustainable Community Strategy and current development of a revised city Climate Change Action Plan. The planning process had included a review of the original 2006 version and will also reflect the agreed outcomes from this Panel's recommendations.

The current council leadership priorities under a Sustainable City theme were:

- 10:10 – committing the council to working for a significant reduction in its CO2 emissions in 2010/11;
- supporting the city-wide 10:10 campaign;
- supporting the offshore wind farm; and maximising its local economic impact
- more electrical vehicle charging points across the city

Cross-council co-ordination

The council's Carbon Management Board, now headed by the Strategic Director for Resources, co-ordinated carbon reduction activity across buildings, fleet, staff travel and street lighting. There was also a wider cross-council officer working group.

The Resources Unit, including the Policy, Performance & Analysis teams, supported cross-council co-ordination relating to work across the city, including partnership working. Increasingly this was also the focus of the Strategic Director for Place, linked to the new commissioning programme.

Ambitions of the CSP

The CSP had 3 top priorities:

- tackling climate change – the city quickly cutting greenhouse gas emissions; and planning and adapting well to a changing climate locally
- transforming the city for wildlife and people – applying for UNESCO Biosphere Reserve status
- reducing the city's ecological footprint from the equivalent of 3.5 planets per person to one planet living

The Partnership, like the city council, saw increasing renewable energy generation locally in the context of its carbon and resource reduction priorities, rather than as an end in itself.

A key point was that renewable energy needs to be seen in the context of energy management and sustainability. Demand reduction would always be higher up in the hierarchy than renewable energy.

Although Feed-in Tariff provided financial incentives for renewables now, good energy management also meant considering the potential for efficient, sustainable energy options as a transition to a low carbon future, such as gas fired Combined Heat and Power (CHP).

Q: *On page three of your written response, the policy commits to securing renewable energy how does this fit with value for money?*

Angela Dymott (AD):- Head of Property and Design The council began to purchase renewable energy 5-6 years ago and was the first council to do so. At this time it cost approximately 10% more, but tax is refunded through the climate change levy which more-or-less balanced out the cost. The levy has decreased recently due to the increase in renewable energy suppliers. The council has continued to purchase green energy.

Q: *Regarding the CSP, Is Brighton ahead of the curve or lagging behind?*

TC: As both Partnership manager and the council's Head of Sustainability it is hard to answer that question due to the potential conflict of interest.

But trying to answer it objectively, the perception of the CSP as a whole is that:

- The city has a greater responsibility as a whole to reduce carbon emissions than it is realising
- This is across a very broad area of policies and practices
- It is not meeting city ambitions and targets in the Sustainable Community Strategy
- So it is not meeting the partnership's ambitions
- The Council is a key player, but not the only one

The chair of the Partnership has written to other partnership chairs to ask what they are going to do to better enable the city to meet targets. The perception with regard to CO₂ reduction is that all parties and major stakeholders in the city could do much better, not just the council.

Q: *How can commitments to reduce traffic in the city be achieved without committing to increase the number of electric car charging points?*

TC: This is a political issue and it isn't really for me to say. Although on the subject of electric vehicles, people don't buy them unless the charging infrastructure exists to support them and the number is increasing.

Martin Randall (MR): Head of Planning and Public Protection This issue touches upon parking standards and the number of parking spaces allocated to developers. This message is somewhat cloudy to partners and developers and parking standards related to new developments can be tricky. The message to developers from the Planning Committee, allied to the council's planning document, needs to have a pragmatic line which ensures that development is not restricted whilst retaining the city's sustainability credentials.

Q: *The Corporate Renewable Energy Policy brings together many roles within the council to co-ordinate. Has any thought been given to how to bring the ideas and experiences of outside groups, such as developers or community groups, to the table?*

TC: The Draft Corporate Renewable Energy Policy is essentially about the council and its estate. The outcome of this panel is more likely to inform wider policy.

AD: The Draft Corporate Renewable Energy Policy is a framework for the council. It enables us to bring together all the different elements within the council. Glynnan Barham has developed this Policy.

Q: *Clearly the council takes a lead role within the city, what can it do to involve other partners and groups within the city?*

AD: It [The Draft Corporate Renewable Energy Policy] does cover some of that.

Glynnan Barham (GB): Energy & Water Manager: The policy does have a primary focus on council property but it understands the need to look wider than the council to offer support and experience for other sections within the city.

Martin Randall - Head of Planning and Public Protection

Martin Randall told the panel that it is worth remembering that Town Planning's statutory purpose is to deliver "sustainable development". There is a supportive national planning framework and a comprehensive set of local policies.

Council planning policies to promote the use of renewables have been around since 2001. This approach has been crystallised in our Sustainable Design Supplementary Planning Document (SPD) from 2008. The overall planning policy framework provides support and advice including planning advisory notes on subjects such as microgeneration.

Our approach has been 'zero carbon' rather than aiming for a specific renewable energy target. This reflects the hierarchy that Thurstan has already touched upon (i.e. reduction then efficiency then renewables). This also enables the council to use more imaginative solutions when seeking carbon reduction. Renewables are part of this equation but it is important to keep our eye on what it is we intend to achieve overall.

The council has achieved high levels of compliance with its planning standards and been recognised as 'best practice' from a number of sources. The monitoring that has been undertaken shows a significant uplift in standards in new builds. An example is that since September 2008 when our Sustainable Design SPD was installed, every single new residential development new-build has been at least code 3 which is an excellent achievement. Of 111 units, 19 have achieved code 4 and some have achieved code 5.

A key message was that early stage discussions, i.e. pre application, needs to take place around the development process so that sustainability and renewables are not treated as 'bolt-ons' afterwards. Developments which have add-on bits, later in the development process, often end up not looking very good. Another benefit of pre-application work is minimizing the risk of deterring developers from investing in the city. This element was integral to the planning message. The earlier discussions are had in the planning process with developers, the more straight forward the process was.

The AmEx building was a good example with regard to carbon reduction and finding imaginative solutions. Investment for a local school's boiler was secured through a Section 106 agreement where the building's specifications didn't quite achieve the carbon reduction standards required in the planning process.

Retrofitting has been a big challenge. Planning often needs to find imaginative solutions and a balance must be struck between carbon standards and preserving listed buildings.

Planning framework was changing continually. Ground and air source heat pumps, solar PV, biomass and Combined Heat and Power (CHP) are now easier to secure in planning but caveats still exist around conservation areas and listed buildings. The framework does not include wind turbine guidance.

The panel should be mindful of the new National Planning Statement which should clarify the role for planning in supporting zero carbon technologies. This should aim to

bring together a plethora of advice including renewables. We needed to adopt the Core Strategy. This will formalise some important opportunities, for example carbon offsetting.

Neighbourhood planning and localism needed to be addressed. The Localism Bill provides an opportunity for neighbourhood plans which will feed into the wider plan for the city.

More and better monitoring is crucial. The council has been supported by the Building Research Establishment (BRE) regarding estimates in kilowatts of the potential savings made by residents. A capacity study would be beneficial. For example, studying heat loads and assessing both where heat is generated and where it is needed in the city.

The council was about to become the first local authority to use the Energy Saving Trust's new modelling tool to measure carbon emissions. This involved measuring carbon emissions at the design stage. This will continue to provide useful advice and support for developers in the planning process.

Roger Dowty (RD) – Design and Conservation Manager

Roger Dowty told the panel that in respect to retrofitting within conservation areas, residents now had much greater freedom with regard to installing solar panels without needing planning permission. However people often choose to live in conservation areas, because of the controls placed on these areas and the limits to the amount of change. The attitude towards solar panels being placed on roofs in conservation areas was probably 50-50 for and against. Few enquiries were made about solar panels, even fewer about wind turbines. Loft conversions and roof alterations were more common. The expertise involved in loft conversions and roof alterations may lead to an opportunity to be coupled with solar installations. The installation of solar panels was encouraged on listed buildings with invisible roofs. Solar slate tiles were a suitable alternative to concrete roof tiles on listed/conservation buildings.

Sam Rouse (SR) - Air Quality Advisor

Sam told the Panel that Nitrogen dioxide in Brighton & Hove (B&H) did not comply with the national air quality strategy whose targets are legally binding, a problem within most of the city centre. There was a lot of common ground between carbon reduction and other air quality problems, so joined up thinking was encouraged.

- Most air quality issues in B&H were traffic related but this might not always be the case if CHP or biomass was incorporated into the city.
- There was an opportunity for renewable energy to feed into sustainable transport for example electrification of railways and busses.
- Cars were not the only problem, busses and commercial vans also contributed to lowering air quality.

Common ground has been identified between the Government's sustainable transport priorities of sustainable development local economy and carbon with local air quality. Part of the air quality action plan was to implement the low emissions strategy which was currently in development across Sussex. This fed into the local transport plan and

the air quality action plan. Both documents were currently being finalised, following a period of public consultation.

The air quality problems in B&H were not unique. The city was the worst in Sussex, but not as serious as in central London. The council shared best practice around the UK. The council received Planning applications for small power provision installations such as biomass and wood burners. In conjunction with Environmental Protection UK, the council produced guidance for local authorities on how to deal with such applications. The general consensus was that some sites in the city were less suitable for biomass or wood burning boilers, because they would contribute to lowering local air quality. The costs for managing dispersion could be prohibitively expensive and chimneys and stacks would have an impact on conservation. Biomass could be a possible source of renewable energy on the outskirts of Brighton, to be reviewed on a case by case basis.

Q: *What are your experiences of the problems with wind turbines and noise?*

SR: Noise from wind turbines is improving as technology advances. We don't get many complaints about noise from turbines. Most applications for turbines tend to be on industrial sites or off shore, where there is little concern for noise pollution. We don't really anticipate there being a statutory nuisance issue from wind turbines. Shadow and flicker are not really our remit.

Q: *Could you give us more information on this golden vision of providing bus routes powered by locally derived renewable electricity. Has this been done elsewhere? How has it been achieved and were the costs shared between the transport provider and local authority?*

Also as sources of funding become scarce and the council looks more to s106 as a means for financing projects - are renewable energy projects likely to take a back seat as by they can be less visible?

SR: There are 5 key bus routes in B&H which take on the majority of passenger traffic. Buses are a source of air quality problems and they could only be clean if they were electric. Pilot projects are in progress for hydrogen fuel cell buses. Diesel buses do contribute to particulate pollution. The potential for offshore power generation would be key to that.

Q: How much more could be achieved in this area?

SR: Manchester is a good example. As with vehicle charging points, they are very new and it takes time to change behaviour. Good practice exists elsewhere and it would be worth looking into.

MR: It would be worth getting the Transport team involved to find out exactly what we are doing in this area.

There is no doubt that securing s.106 money for renewable projects will become increasingly difficult, so it will be important that we are not reliant on s.106 money. Although AmEx is a good example of how s.106 can be used, it is important to stress that carbon reduction should be achieved as part of the development process. If good

planning advice is given, drawing upon best practice from elsewhere, s.106 will not be depended upon for renewable developments.

The Community Infrastructure Levy (CIL) provides the opportunity to draw together development proposals when the strategic need for that infrastructure has been identified. This may be the way forward to provide funding for CHP and district heating proposals. Although the detail around the CIL has not yet been finalised.

Q: *If the school boiler example was a partial offset, what was learned from the AmEx example about how much funding is required for total offset in line with carbon targets? Also what lessons can be learned about not scaring off developers?*

The negotiations can be quite tough. This is because developers want to see the justification for any s.106 agreements. So it is important that the best possible data is available during the negotiations and using broad figures is not enough to persuade developers to meet our targets. Clear statistics need to be gathered early enough to prove genuine energy savings.

Baseline averages are available as industry standards. For example data exists on the emission levels for a two bedroom flat, it does however require both the data and the expertise to interpret it in order to successfully turn it into a negotiating position.

Q: *Do you feel that you have that data at the moment and are able to negotiate with developers as an equal partner?*

MR: The AmEx example demonstrates that we did, but it did require a lot of last minute work to secure that particular data. It shows that good monitoring is crucial and we would be in a better negotiating position if good data was readily available at the outset.

Q: *As the AmEx building was a new development, were they not willing or unable to make the adjustments to meet the carbon reduction targets?*

MR: It is more likely that they were unable to meet the targets.

Q: *In that case is the bar being set too high for developers?*

MR: We do set a high bar, but it isn't too high. With AmEx it related to the particular form of development needed. Where we do have to be flexible is in understanding the business operation. When the council settles for a particular design, it needs to understand both how this might impact on the business and the danger that developers choose to relocate elsewhere.

Within the framework it was clear that AmEx couldn't do everything we wanted. Some of the performance enhancements such as triple glazed windows were 'bolted-on' after the design stage to increase the carbon reduction. A gap still existed at the end of the development, which led us to go down the s.106 route. An element of the negotiation process is not scientific and requires the developer and the council to realise what is possible within the framework.

Q: *Where solar panels are placed Houses in Multiple Occupation (HMO), does only one of the dwellings receive the benefits of the renewable energy produced? On listed buildings, are there any alternatives to solar panels that won't spoil the look of the building?*

RD: It is a key point that listed buildings are often HMOs, so there are technical and social issues surrounding the delivery of renewables.

Having regard to the special duties regarding historic buildings, the industry is continually developing alternatives for listed buildings such as very slim double glazing units that can be accommodated within existing traditional window frames and solar slates, that do not spoil the character or appearance of the building. However, these alternatives are more expensive.

AD: The council's property portfolio is very wide and varied. It consists of operational buildings such as schools, residential buildings, libraries and museums. Its investment portfolio includes many of the city's shops, retail and industrial buildings and farmland. Our aim is to reduce carbon emissions and renewables are a solution within that.

Glynnan Barham (GB) – Energy and Water Manager and Angela Dymott (AD) – Head of Property and Design

Glynnan told the Panel that the opportunities for renewables had increased significantly over the past year. This was shown in the monitoring information which was now available. The main focus of the Energy and Water team was to ensure that it had robust information. They hoped to have post-completion information about all its properties to clearly monitor those sites and provide information about their carbon footprint. Then it can be identified where sufficient energy management can be put in place. This was the primary focus and when management efficiencies have been met then perhaps could identify other savings such as from renewables.

The installation of AMR Smart Meters should help gather some of this monitoring information. They were due to be installed by the end of this year and will provide more accurate data about the energy usage of the council's property portfolio.

The key opportunities within the council, relating to renewables, were in the use of council owned land. Following investigations - the civic buildings, galleries, museums, schools, housing sites and industrial farmland have been highlighted as having the greatest potential for renewables.

The barriers encountered were largely financial although the introduction of the Feed-in Tariff, and the possible introduction of the RHI, may alleviate some of these issues. However the fast changing national policy has caused the need to continually make adjustments in light to new policy directions.

Q: *What were the key financial opportunities to the renewable sector and what is the council doing to take advantage of those in light of the Feed-in Tariff and Renewable Heat Incentive?*

GB: The council had looked at where it could make financial savings with the energy offset through the application of renewables and looking at the revenue that those areas can generate. In order to be able to take advantage of these schemes, the council had drawn up a list of suitable sites that lend themselves to the application of PV panels and the result of this investigation was due soon. A thorough desktop exercise had been carried out, looking at the vast array of council owned properties and identifying those which have the right orientation and a low risk of overshadowing and are structurally sound. This had been narrowed down to a suitable list.

The Team had looked particularly at the key areas that the Feed-in Tariff appeared to encourage, especially solar PV and wind turbines. A desktop exercise was conducted into assessing wind speed information which concluded that certain specifications had to be met for the turbines to be effective. Though turbines below this specification may not be hugely beneficial, the council would not necessarily discourage applications for planning permission. The wind mapping exercise identified that many of the areas with sufficient wind were often in conservation areas or areas where planning might not necessarily be possible to obtain.

The council was also looking at carrying out a city wide heat mapping exercise. This would identify where the heat areas are within the city and where there may be opportunities to create partnerships and a heating network.

Q: *How far are the plans for the city to develop energy services companies, what should be in energy services contracts in the cities?*

GB: The council was currently modelling Energy Service Companies (ESCOs) based on the one successfully employed by the Natural History Museum in London. This is where I was previously employed and had experience of an ESCO which set up a large scale CHP plant. It was a successful application which could be replicated in Brighton.

Two schemes were currently being developed. Firstly, Woodvale Crematoria to look at the potential for electricity to be generated from the heat captured. This would be used for offsetting within the crematoria and provide heating for the local area. The final report from the Woodvale Crematoria project was due this week and the project was nearing completion.

The civics ESCO was being developed for Kings House, Hove Town Hall, Bartholomew House and Brighton Town Hall. This would look at general parts replacement as well as CHP schemes, and should come to completion towards the end of the financial year.

We are investigating the energy use for potential ESCOs for all council properties, alongside the use of the heat mapping.

Q: *What are the key aims on outcomes of the planned renewables policy that we are producing? And how will the plans encourage growth in the renewable energy sector?*

GB: The principle aim behind the Renewables Policy has been to strengthen the drive and focus the council has on renewables. From the policy we expected a standardisation of processes to tackle the issue of renewables, removing the risk of a splintered approach on such matters. As the council strives for a developed and strengthened EMS, having

such policies in place only supports this process, through removal of risk, setting defined guidelines and demonstrating the necessary avenues of communication if such as project is applied. It would also set guidelines on the sorts of technologies to be used. We also expect the policy to strengthen the work around the environmental management system.

Q. *What RE projects are being planned by the council e.g. incorporating into new build programmes, incorporated in schools?*

AD: The Architecture and Design team had incorporated a number of renewable projects around the city, particularly in schools. We have also looked at our building maintenance programmes and have tried to incorporate renewables into boiler replacements, insulation projects and window replacements.

The council had actively promoted sustainable solutions using its developing sustainable design policy. This was possible due to our close links with the Planning team and Sustainability team.

Projects carried out by Property's Architectural and Education Capital Project teams were working towards designing to BREEAM 'excellent' where practical, and 'very good' on larger primary capital schemes for schools and other corporate capital projects. Sustainable designs for the education and corporate capital programmes have to date incorporated where appropriate: ground source heat pumps for space heating, solar panels on the roofs to heat hot water, wind turbines, rain water harvesting, passive ventilation and sedum, roofs. These projects have played an educational role as children are learning about renewables and actually seeing how they work through our installations. Future projects incorporating similar technologies are planned for Somerhill School, Westdene, Goldstone and Queens Park Primary schools. In some of these schools additional technologies such as air source heat pumps are also being incorporated.

We have learned from others. A city property group, incorporating all our public sector partners, talks about shared services, accommodation, energy reduction, carbon reduction and travel.

GB & AD: The experience with Birmingham Council, and others, is that they wanted to lead by example by rolling out renewables on a large scale which may not be particularly suitable. Other councils are taking completely different stances and so there doesn't appear to be a common approach with council-led renewable projects.

Some councils have taken the lead by forging partnerships to share ideas and knowledge. For example, a joint partnership with energy managers which is a useful way of sharing knowledge and experience. Although B&H doesn't have the same level of scope, SERENE (the South East Region Energy Network) which includes membership from Kent county Council to Hampshire county Council, recently incorporating Surrey, Southampton and Portsmouth has been an invaluable source of information. For example, it has become clear that Southampton has particular expertise and experience dealing with district heating systems and CHP.

Q: *What potential is there in the city for the council to join forces with other organisations?*

The council was setting up a pilot large generation project across the road at the Norton road car park. This would incorporate large scale PV. This project would also encourage training and apprenticeships as well. There is also the potential for joint projects within the city, which would be assessed on a case by case basis on the strength of the business case before any final decisions were made.

At present the experience has been that the majority of offers being put on the table from these groups are simply at the idea stage and would leave the council financially vulnerable.

One way we have tried to support community schemes, was to strengthen the sustainability criteria within the procurement stage, removing the obstacles that some of the smaller companies often experience during this process.

Which technology would be best to consider for the council properties?

GB: As previously highlighted, the possibility for solar panels existed on a list of sites. The wind speed analysis has highlighted areas that could lend themselves for wind turbines however these locations would be more likely to receive a significant amount of opposition. With large refurbishment projects, the potential exists for ground and air source heat pumps. There is also potential for CHP as well as large and small scale absorption chilling technology in partnership with ESCOs. The heat mapping exercise will hopefully strengthen the case for that.

AD: The council's accommodation strategy has concentrated mainly on carbon reduction although renewables will have a place where appropriate. The buildings that have been reviewed for the accommodation strategy are included within the ESCo project which incorporated investigations into CHP technology. 'Workstyles' is a way in which Property & Design have worked within the council's accommodation strategy. By looking at alternative ways of working, such as, home working, to reduce travel and the carbon footprint of our offices. These issues would be addressed in our plan which would look at the next 5 -10 years and where the appropriate technologies can be applied.

What is the council doing to increase the amount of renewable energy procures?

AD: As previously mentioned, 100% of the council's electricity came from renewable sources. We have looked at the potential for green gas, but looking at the short to mid-term, the market simply is not available. We have already covered the potential for CHP.

Q: *What do think about the benefits of flagship projects?*

GB: The city had a strong reputation with regard to environmental issues and it was easy to build on this, particularly with the fast pace of change and the potential benefits from the Feed-in Tariff. It is important not to leap in to these projects, as we have already seen the price of solar panels has come down considerably. The Norton car park is an example of a flagship project.

Q: *How would you describe the council's relationship with the distribution network operator?*

GB: We have been party to proposals that are being taken to Government and are encouraging the reduction in the distribution charges. This would allow companies and authorities to generate at one site and export to the grid and then offset usage at another owned site without having to pay high distribution charges or having to lay independent supply cables. The current charges were approximately 13p per Kilowatt. Proposals pushed for a nominal charge in the cost of distribution, which could be significant for projects in the future.

With regard to new projects, we were working closely with distribution networks, suppliers and companies to ensure that all new developments are meeting the demand requirements.

The potential for reducing the council's energy bill using the sites highlighted for renewables, still stands at approximately 5%. We have been told to expect utility costs increases of up to 10% or even higher which will provide a significant focus with regard to the application of renewables.

Q: *What have been the key findings of the work that has been done to assist the potential for PV in possible sites?*

This has mostly been covered previously

AD & GB: People came forward requesting that the council donate sites. We have looked at these on a case by case basis, but we would really need a sustainable business case.

Q: *How has SALIX loan funding worked and can it support renewables?*

GB: The SALIX funding ramped up significantly again last year. Although this funding did support renewables, it was not always possible to meet a lot of the compliance criteria that is set for that type of technology. They prefer smaller scale projects such as insulation, BMS upgrades rather than renewables. The compliance criteria looked for very short payback times and strict £ per tonne of CO₂ returns. Although we have looked at it we have realised there are more advantageous sources of funding out there.

Q: *You have mentioned the future projects for schools such as Queen's Park, what is already being done at Whitehawk Primary? Could we have some examples?*

AD: Promised to provide the panel with examples.

Q: *Are the educational benefits from installing renewables in these schools being realised?*

AD: Yes. That was the exciting bit!

GB: We visited the schools and met with teacher about how the energy factors can be blended into the curriculum.

Q: *What is your timetable for renewable energy development?*

TC: The ambition was to get this to the next Sustainability Cabinet Meeting in March. However with elections coming up this can be difficult.

Jugal Sharma (JS) - Lead Commissioner Housing

JS: Jugal told that panel that there were roughly 180,000 properties in the city. 25,000 were in the private rented sector, 12,000 homes were in the public sector and 2,000 leaseholders.

It was been calculated that 70% of all deprivation was focused around council estates, with a large proportion also in HMOs and on the sea front. The biggest factor contributing to inequality in the most deprived areas has been energy costs. A disproportionate increase in either electricity or gas, combined with travel costs, has meant that an average income in the East of the city - which started at £7,500 - has now dropped to £4,500. So 70% of people living in our houses are suffering from poverty or one sort or another and/or are on benefits. Our main focus has been to identify the key sources of inequality. We have mapped our estates and have a master plan with all of our properties within the HRAOs. We have found that the pockets of deprivation are centred around the streets rather than specific areas, for example between Whitehawk and Queen's Park.

We have recognised that there needed to be a way of addressing the neighbourhood in terms of deprivation, which balances the building of new council homes with refurbishment of existing ones. Meeting the government's targets around decent homes has been one objective, but the bar is very low and did not address multiple needs. Fitting a new kitchen or re-wiring a house, did not necessarily address the wider issue of deprivation or poverty.

Key meters have the biggest impact on deprivation. Levels of deprivation could swing dramatically from one week to the next, based on the fact that one week residents are not able to charge their meter key. Key meters have a disproportionately high level of charge for electricity when those who use them are often the most deprived. We have not succeeded in lowering meter charges. We explored the possibility of becoming suppliers of key meter charging machines by entering into contracts with energy suppliers but this would have only succeeded in reducing the mark up placed on the keys by retailers without impacting on the cost of electricity. Therefore it was not considered to make a significant saving for the customer.

In the private rented sector there were 25,000 private rented sector properties in the city. 70% of deprivation sits on the seafront and mostly people living in HMOs. A disproportionately high number of these people are on benefits and income in these areas has dropped. People leave temporary accommodation and move into council owned property, this lies mostly in the East of the city which creates a pocket of deprivation.

The level of deprivation drives regeneration. While the number of decent homes within the council rented sector has dropped to around 50%, the number of decent homes in the private sector has gone up. There are a higher number of homes in the private sector that do not meet the decent home criteria, than in the public rented sector.

We used a number of measures in conjunction with East Sussex. We have bid for, and been successful for, large sources of funding which have gone into energy efficiency measures. This has enabled us to spend about £1m per year on various forms of efficiency measures. These have been targeted to the unemployed and older people. We had a disproportionate number of older people living in the private rented sector whose homes do not meet the decent homes standard.

We have had an energy partner (Climate) who has very successfully administered the energy efficiency measures on our properties for a while. 18 months ago we asked them to conduct a study on council estates, to assess where we could generate additional income to continue the level of energy measures that we currently had. They determined that around 1,200 council homes could be installed with solar PV, along with 360 communal blocks. This would mean around 1600 solar PV installations on council properties out of a total stock of 12,000. These 1600 houses and 67 communal were chosen because they were south facing, had the least risk of overshadowing and had the correct orientation for solar panels.

The biggest driver was the potential for this to generate income for us over a 25 year period. The Housing Revenue Account (HRA) would borrow £15-16m, this would have a net return of 8-10%, generating around £500,000 per year for the HRA. We could invest the £500,000 in other energy measures. The investment could be used in the houses which face East and West, and could receive hot water instead of Solar PV. This could generate another £500,000 to be reinvested into the HRA. As an investment this only deals with levels of deprivation on council owned properties. In terms of carbon savings this project makes 48,000 tonnes over 5 years.

Q: *Has there been any resistance from tenants?*

I have only talked about the £500,000 that we get. There is another £400,000 which potentially tenants could have as free electricity. The proposal is not to give away £400,000 worth of free electricity to just 1600 people. The rest could be used for further energy saving measures. Additionally with rising gas and electricity costs, that free electricity becomes a very valuable resource which we should be maximising.

Q: *This seems to be a perfect opportunity. Who are we working with, what is the timeframe, where are these sites and is there the potential to work with local energy co-operatives?*

JS: Climate Energy has done a business plan, which is fairly robust. The partnership would be with East Sussex and Eastbourne is another partner which is further ahead in the process than we are. The timescale for the contract could be within the next 6 weeks.

Q: *What is the potential to work with energy co-ops or Social Enterprises?*

JS: The partnership has been with a private consultancy that were drawing up a business plan, rather than necessarily delivering the project. One business model is that we borrowed the money and did it ourselves, which is what most local authorities have looked to do and is the model we have looked at. The £500,000 mentioned involves us buying it, installing it, maintaining it because this gave us the best opportunity to get the involvement of the community and offer apprenticeships etc.

Q: *Wouldn't doing this in-house restrict external enterprise getting involved?*

JS: It may well have encouraged it by stimulating demand for installations needed and also we would also be in a better position to get exactly what we want.

Q: Would this be beneficial or detrimental to the energy sector in the city?

JS: We are only dealing with 1,600 council properties; the question is how we enable the other players to get involved with the other 25,000 private rented properties. The social benefits could be so great that it may involve the council providing financial backing to further projects in the city.

Nigel Manvell (NM) - Value For Money Program Director

Nigel told the Panel that much of what had been talked about substantially covered the financial aspects of the advance questions posed by the panel).

In terms of financing community-wide schemes, the council may introduce policies to support wider community initiatives but only if it has the appropriate statutory powers to do so. This could change with the Localism Bill which may result in the removal of the ultra vires rule and give local authorities a general power of competence which may open up new opportunities. Alternatively, the council may be able to explore the use of wellbeing powers, which some Scottish councils have exploited (although the powers are different to England), to pursue community-based renewable objectives. Essentially, the other alternative available to local authorities for providing community facilities is to set up an ESCO (e.g. Woking's 'Thamesway' ESCO). However, these are large joint ventures that need very robust business cases.

Initiating projects involving the council's own estate is more straightforward and simply requires either financial commitment from the council or, in the case of invest-to-save initiatives, that a sound business case with reasonable pay-back periods is signed off. If invest-to-save schemes did not repay within a reasonable time period (e.g. 5-7 years), the council would be unlikely to support investment. One area where the council has provided financial commitment is in the decision to buy green energy which initially had a cost to the council and the taxpayer. However this has now been significantly offset by carbon reduction initiatives and usage changes.

In general, the council is primarily looking at business cases that make good financial sense, making use of such facilities as FITs payments and the RHI scheme. As Glynnan mentioned we are looking at an investment of over £1m for PV panels on over 40 sites, under a procured arrangement with a rate of return acceptable to the Council.

Energy prices were expected to go up, by perhaps as much as 10% over the course of the next year. The council's 2011-12 budget accounted for this increase and it is expected that our reduced usage of electricity will more than offset this cost.

Our medium term financial strategy does include provision for around 2% inflation, which could be used to meet the needs of increased energy inflation costs as well as inflationary pressures. There is also general service pressure provision of around £7.5m

per annum which could feasibly be applied to a whole range of service/cost pressures, including energy.

Remaining SALIX funding of approximately £140,000 exists, but plans have now been drawn up to fully commit this by the 31st March, otherwise the money would be repayable under the rules of the scheme. This funding is largely focused on carbon reduction, rather than renewables at this stage.

Q: *As Value for Money Programme Director do you see renewables as an income generator for the council or as a means of financing other renewables projects?*

NM: This is purely a policy decision. The council could choose to recycle the money or we could direct the money into other projects or to support the budget in general. Generally speaking, Government policy is concerned with carbon reduction targets; we are reflecting this by investing in relevant initiatives. Large scale income generation is probably beyond the council's power without forming an ESCO or being involved in some sort of trading operation.

Q *With regard to fuel poverty money could be used to help those in fuel poverty.*

Q: *You mentioned that we could invest £1m into PBR-45 sites or possibly set up an ESCO, I understand that there is a lot of policy involved, but we hear a lot in the news about other cities which have done this. Do you think the city here has done a good job in preparing for these opportunities? Do you think the political leadership exists to follow future opportunities such as the RHI?*

NM: There is generally a reasonable level of awareness across the council and its partners of the possibilities around the funding mechanisms and opportunities available for renewables.

GB: Looking back at the energy management issues relating to the council, things are very different now. We are trying to make council members much more aware of the legislation and funding options available.

TC: With regard to the continued 'moving of the goalposts' around funding such as the Feed-in Tariff, I would be concerned about the council taking a leading role in endorsing renewables as the way to go for stakeholders who need to make their own capital calculations. Larger property owners, by and large, are doing so anyway. But this is a difficult decision to make for households.

Round Table Discussion

Q: *Everyone here has a stake in renewables, who is the champion for renewable energy?*

TC: I think we see ourselves as carbon reduction champions. Renewables has a place to play in that process. The champions of renewable energy are largely within the community not necessarily within the council although there are individuals who are very passionate and knowledgeable about it.

- Q: *Renewable energy obviously exists within the wider context of sustainability, climate change, the potential to benefit from Feed-in Tariff among others. As the focus of the panel has been specifically renewables rather than more generally carbon reduction or climate change, to what extent do we need a renewable energy champion?*
- MR: This concerns the theme of leadership. The sustainability partnership could be seen as going some way towards providing leadership in this area. Another issue is the council's reputation. Are we leaders in this area and do we want to be? This is up for debate and discussion.
- Q: *Perhaps an elected member should be leading the charge for renewables. It is perhaps unfair to place the burden on council officers to take the lead in this area. This is a political issue.*
- MR: A body of political support exists nationally for this. Whatever the theme when the council decides to champion an issue, the council officers then are charged with delivering it.

21. A.O.B

The meeting concluded at 16.10

Appendix 6

Individual written responses to Renewable Energy Scrutiny Panel

Response 1

Since I am probably the person with the oldest solar thermal system in B&H (would be interested if there are others as old....). I have had my solar thermal installation since December 1998. Thus I had it installed well before there were grants or other incentives, for me the incentive was because I could foresee the forthcoming problem with CO₂ emissions and fossil fuels and this seemed a way to reduce my footprint and also - hopefully - save money. I do not have a car and, compared to a new car a solar panel is by far the better choice - no depreciation - no carbon emissions - and saving money..... I am always surprised when people say it is too expensive for them, but then go and buy a car for £7 - £10,000 - it's not really about the cost in many cases but about our assumptions about the "right" way to spend money.

The system I have is 8- tube vacuum tube made by ***** it's on a south/west facing roof and is about 1 1/2 m². At the time it cost £3000, although I have had a new cylinder installed since at £600. I know I should be able to give figures on how much money I saved, but I am afraid life is too short for that - all I can say is that, despite the fact that it is now "old", in a good summer I rarely have to heat water.

But more than the saving of money I did it for the satisfaction of doing something concrete - I have also of course done the usual things - roof insulation - double-glazed windows (but not all - I use blinds and heavy curtains). Since I live in a terraced house there is no cavity wall insulation - but I always think terraced houses are in themselves "sustainable" in that most walls are in common.

The system has worked perfectly well - the only extra expensive is anti-freeze every 4 or 5 years and the cost of a new cylinder (that was because the old one sprung a leak nothing to do with the solar panel itself).

Response 2

We installed solar voltaic panels in March - the decision to install at that point was for a number of reasons;

- being able to take up the grants that were still on offer (i.e. already having sufficient insulation in the roof and cavity walls) and to then be ready for the introduction of the feed in tariff
- the incidental availability of enough cash to fund the installation at that point which meant that we haven't had to borrow
- changes in the planning system (we had looked into installing panels about 4 years earlier and had been prevented from going ahead by the more restrictive planning rules in force then)
- having a large south facing roof which has meant that we can install a relatively large system which in turn will produce better savings on our energy bills and higher FIT income
- contributing to the overall reduction in the consumption of fossil fuels and unsustainable energy production

We had very good service from our installers (****), but have been less happy with the service from ***** in registering for and receiving the FIT payments - I think they had teething problems setting up the new system.

Response 3

I live in a rented flat. Have electric panel heating which is inefficient and expensive. I can and do use energy saving lightbulbs, Keep heating low and wear jumpers, never use the oven unless cooking several things, have installed water meter. The big changes would need to be done by the landlord / property agent and they will only respond to money. Either grants or tax incentives.

Response 4

What do you want to know?

We have solar thermal which is great.

Wood burner which is very efficient. MVHR (*Mechanical ventilation with heat recovery* <http://www.greenbuildingstore.co.uk/page--ventilation-mvhr.html>)

Response 4a (further to response 4)

Why you decided to install them?

Very concerned by overuse of resources to heat space/water. And the thought of virtually free hot water was too much to turn down.

The system specified by our architect was not what we wanted! We kept questioning why we had to heat 1/2 the thermal store every morning in case we decided to have a shower, (if I am gardening I usually do so early morning and shower afterwards often after the sun has been out) Eventually in order to find out more my husband when on a course by **** in order to learn how to fit solar thermal himself. this answered the big question "why can you not feed hot water into a condensing boiler? Cos they make the boilers with plastic inflow pipes and these might melt!!! We have a boiler with copper inflow pipes and use the preheated water in the thermal store to go into the boiler ONLY WHEN we need it and not just in case!

The system works beautifully and we turned out boiler on for hot water mid October! We moved in in June and the boiler wasn't turned on until then. Our early gas bills were very small!

How did you choose the installers and have they been a good choice?

Hubby was a great choice, we got the system exactly as we wanted and it cost us around £1,200 ***** were excellent suppliers and we are liaising with them over PV

What went well or could have gone better in installing your solar panels?

If we had known what we knew by the time we were installing it, the house would have been better designed so that the feed pipes to the roof would not be so obvious. Again architect didn't plot the pipe run properly!!

Response 5

Following your email seeking experience of those who have installed PV panels.

I installed them for a variety of reasons; I consider myself a keen environmentalist and have done various things in the past to reduce my impact on the planet (eg conserve wildlife, I installed PV because I wanted to demonstrate that I can generate more electricity than I consume. I had decided some time ago not do Solar hot water as I don't have a hot water tank and I am a single occupier of my 2 bed mid Victorian terrace and my gas bill is generally very small.

I installed PV panels in January of 2010 as the time seemed right for technology and financial returns (low interest rates, investment for the future) as well as being in a position to afford them (just)

Currently as at my 1.2kw system has generated 1153kwh (and I have used approx 400kwh) over the last 11 months I consider it was a worthwhile thing to do. I used Southern Solar and was surprised how quickly the installation took and undistruptive.

I have yet to receive my first payment following the change in rate in April as there has been a break down in communication which I hope to have sorted soon.

Response 6

I was forwarded a note from your office by ***** of Eco Hi Solar, inviting feedback/comments about solar installations in the area.

I live at ***** and had a thermal solar installation completed here by ***** during November. The system consists of a 2 sqm tubular collector on my (southwest facing) roof, connected to a new solar hot water cylinder in my basement. The system is designed to augment/supplant the energy input for domestic HW from my existing gas boiler.

My motivation to install solar was initiated when I visited two homes featured in the recent Brighon & Hove Council sponsored green energy open houses weekend event, during early September. This was an excellent event, and the exhibitors who had opened their homes had very compelling stories, backed by evidence and hard data. This was inspirational as far as I was concerned, and, having also determined there was a grant of £1500 available towards the cost of installation, I contacted ***** who provided a competitive quote.

The installation at my home coincided with a major refurbishment of the kitchen, in which some plumbing works were anyway needed, so it made good sense to install the solar hot water system at this time - even though there is not much expectation of any solar heating input this time of year.

***** provided a complete service and the installation was carried out with very little mess. Contacts at B&H Council were helpful when I contacted about the grant scheme, and I was able to apply for and receive the notice of success very quickly. The whole process was simple and very straightforward.

The system was commissioned on November 25th and although we have had exceptionally cold weather, nonetheless, I have had the benefit of 12 hours' solar input up to the present date. Clearly, during the warmer months of the year, I can expect much more.

In summary, although I was previously passively interested in green energy and solar, it was the experience of the B&H Council sponsored open houses weekend which inspired me to proceed with a solar installation without delay. I would recommend further similar events as a way of motivating local interest. Further publicity about available grants may well increase interest also.

I hope the above was useful.

Response 7

I was incentivised to install 2.1 kWp on my south facing roof at ***** as British Gas launched a pilot scheme offering an interest free loan to 100 Sussex based homeowners. So I pay back £33 per month for 25 yrs and make hopefully between £70 to £80 per month on the feed in tariff.

So it was a no brainer. If only they would offer the same incentive for insulation. My house is one of the eco open houses and can be found on their website.

Response 8

Further to our phone conversation, requesting user experience of renewable energy, I installed a photo voltaic panel on the south facing roof at the back of ***** , opposite Hove town hall, which building I own, and lease to ***** . It is in a conservation area, but the panels are invisible from street level, so I was told that I did not need planning permission. My experience was as follows.

2008-9

I obtained estimates from 4 companies, ranging between £13,000 and £18,500 for up to 2.24kW, 1,894kWh pa estimated generation. Only 1 company (*****) warned me that a chimney would cast a shadow which would adversely affect the output. I tried to get the installing company to remove the chimney, but none would accept responsibility for this. I pleaded with them to let me use their scaffolding to have a builder remove it, and one (*****) agreed, so I gave them the contract, at £18,500.

Removing the chimney was done by a local builder for £1,000. I had to get a party wall agreement, because it was shared with ***** . That took 2 weeks of phone calling and e mailing, even though the chimney had not been used for decades, and it was holding up the installation, because they were afraid that bricks would be dropped on the panels. The panels were commissioned on 28.10.09, and the installers (*****) gave me a MBS Installer Certificate ***** . I then tried to register the installation with the electricity suppliers. I phoned many companies, being referred on, but nobody registered me.

2010

I have been supplied at home by ***** since 2002, and they were the most helpful. They agreed to register my PV, and to pay me for units generated since 20.4.10, when I read the meter for them at 606. I read the meter again on 13.12.10 at 2071. The units generated were 1465 for 6 months and 3 weeks. I got a cheque for the first half year (summer) of £486.17, which is 33.2 p/kWh. Assuming that the estimated generation of 1.894 kWh is realised in a full year to 20.4.11, my return in the first year will total £629. This represents a return on the £19,500 invested of 3.2%. I am content with this, as it is a real return, and is guaranteed by the government for 25 years.

Response 9

Thanks for the email. I can't come to the meeting on 6th Dec however I am currently going through the process of trying to get solar hot water panels installed and have the following feedback that I'm hoping you can feed in.

1) I find it a little worrying that there are only a handful of solar contractors that you can use in order to be able to get the council grant. This seems to be favouring a small number of contractors rather than encouraging the local solar industry generally.

2) It would be useful if there was one person at the council who could guide me through all the various planning, building control and conservation area applications I have to make. At the moment I am having to deal separately with those 3 departments and the solar contractor and the gas engineer who is installing the boiler and the cylinder, and I'm a bit worried that I'm going to miss something that I am supposed to check or fill out etc, and am also a bit worried that I'm getting slightly different info from different people with overlapping responsibilities. For instance the solar contractor has said that the weight of the panels and cylinder in the loft space is fine but the gas engineer has said he thinks we need it checked by a structural engineer. Therefore I've just phoned up building control and they say I do need a structural engineer and I need to submit a building notice so I'm confused as to why the council approved solar contractor hasn't told me that.

Response 10

I have a bungalow with a south facing roof which would be ideal for solar panels however I am contemplating a loft extension at some point in the future so am not considering fitting them as I think planning permission is only given for extension with flat roofs in my road. Have modifications to planning consents been considered to allow for non flat roofs for people in my situation in order to incorporate solar panels?

Appendix 7 - Written Evidence used as case study in the report

Domestic PV system installed July 2010, *****, Brighton.

Summary of Financial benefits– FEED In TARIFF (FIT) & savings

1.4 kW system.

(Estimated to generate 1,190 kWh peak annually)

8 x Sharp 175W Photovoltaic panels total 12m².

System cost: £9,555.

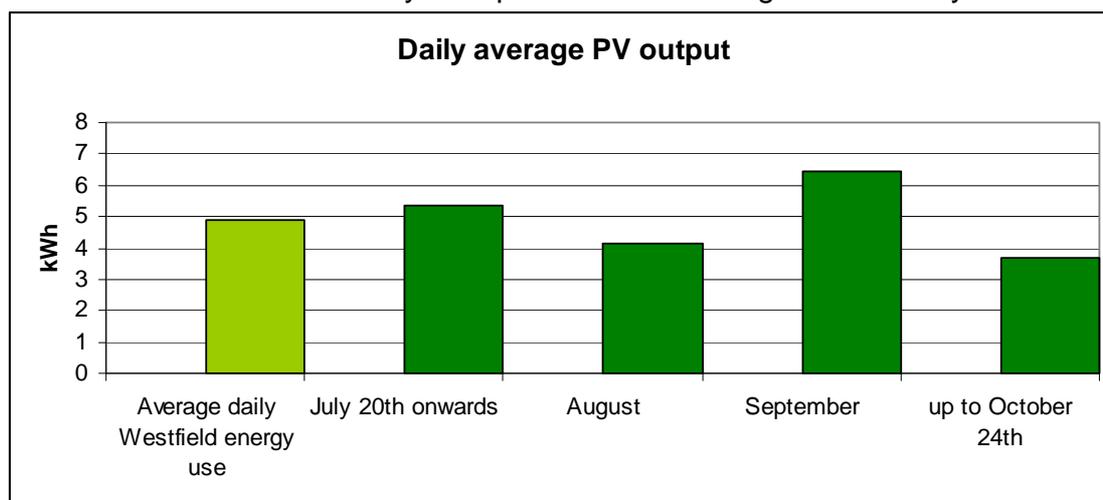
Installed as part of the trial 'Pay as you Save' scheme.

Scheme run by British Gas, installers were

Interest free loan at £31.85/month for 25 years.

We are a family of 4 (2 teenagers) in a semi detached house. We monitor our energy use and try to keep it low (all our lighting is low energy, including LEDs, all our appliances are 'A' or 'A+' rated). We use an average 4.9kWh a day in this house (1600-1700kWh/year).

In the first 3 months our PV system produced on average 4.5kWh/day.



In the winter months the average generated has dropped to 1.2kW.

After 6 months, the PV system has produced a total of 515kWh this is about 60% of what we use. Over a year we can expect them to produce at least twice this 1030kWh, subject to solar resource, but would expect more as May and June are often the best months for solar resource.

The estimated output of the panels is 1,190kWh. Many PV panels in the SE are performing better than the estimated output, so we may go over this. The financial benefits are calculated below based on worst case scenario of 1030kWh based on twice total generated in first 6 months.

Finance

Feed in Tariff

Every kWh electricity generated earns 41.3p
Every kWh fed back to the grid 3p

Therefore

1030kWh generated x 41.3p = £425.39

If half of the 1030kWh is not used in the house is fed into the grid then:

515kWh x 3p = £15.45

Total FIT income = £440.84

Electricity use

If we use half of what is produced, we make savings from not buying 515kWh from the grid.

We currently pay 10.609p per kWh electricity from our energy supplier

This means savings of 515kWh x 10.609p = 5464p

Saved £54.64

Total benefit = £495.47

Loan payments

Monthly payment of 31.85 x 12 months

Less payments of £382.20

TOTAL ESTIMATED ANNUAL FINANCIAL BENEFIT = £113.27

Comments

- The system was expensive: because we were on a government trial we had no choice of installers. I am aware of friends who have installed at lower cost. For example a larger system 2kW at the same cost of £10K.
- If the output is 1190kWh as estimated, this will reduce/offset our CO2 footprint by 640kg CO2/yr (.6 tonne CO2).
- According to the calculations above, this system will have paid for itself in about 20 years, after which time we'd be into profit of about £500 a year. However, if the system performs better than it has through these snowy months (which it should do), or if the price of electricity goes up, the payback time will reduce.

Appendix 8 – Written submission by the Renewables Infrastructure Group of Hove Civic Society

Submission to the Scrutiny Committee of Brighton and Hove City Council

THE POTENTIAL FOR RENEWABLE ENERGY IN THE CITY

by the Renewables Infrastructure Group (RIG) of Hove Civic Society, (chairman Helmut Lusser, (tel 245736, helmut.lusser@globaltolocal.com), and secretary John Kapp, (417997 johnkapp@btinternet.com) This response is the result of 2 public meetings on 3.11.10, and 8.12.10, attended by a total of 20 people in Courtlands hotel Hove.
13.12.10

1 Context of the inquiry

The Renewables Infrastructure Group (RIG) welcomes this initiative of the Council in creating a scrutiny panel, and believes that there is a strong imperative for developing renewable energy in the city, due to the following factors:

1.1 Climate Change legislation

Governments throughout the world are giving increasingly high priority to renewable energy in their climate change agendas. For example, by 2050 the UK is required to cut its carbon dioxide emissions by 80%, to 20% of 1990 values, a 5 fold (or 500%) decrease. The Feed in Tariff, which came into force in UK in April 2010, and the Renewable Heat Incentive, which is due to come into force in April 2011, provide good financial rates of return on investment in photo voltaic (PV) and wind powered generation, and solar heated hot water. The Green Deal component proposed for the Energy Bill is intended to facilitate the implementation of these schemes.

1.2 The vulnerability of UK to foreign oil and gas suppliers

We all tend to assume that electricity will continue to flow out of sockets to our computers, phones, lights, cookers, heaters, appliances, TVs, pumps, motors etc for ever. Also that cheap petrol and diesel will continue to flow out of the pumps at filling stations, to fill up our lorries, cars, buses, trains, aircraft for business as usual. However, most of our energy comes from foreign suppliers who control the price, and can hike it at their will. This happened in 1973, 1979 and in July 2008, when they tripled the price of crude oil from \$50-147 per barrel. Although it came down again after a few weeks, it plunged the world into its current recession. It is now over \$80. These historical events should warn us to reduce our dependency on foreign suppliers by generating as much as possible from local renewable resources. World oil supply peaked in 2008, and as the developing world is hungry for increasingly scarce supplies, the price is bound to rise. Power to keep the lights on in our city is generated from gas, most of which comes from Russia, and we are at the end of a 10,000 mile pipeline. If Russia turned it off, the city would have brown outs and blackouts, which would cause chaos because our computers and phones would not work. We recommend that the council protects municipal supplies, and adopts the target proposed by Al Gore in 2008: 'All electricity renewable and all vehicles electric by 2020'. The following prospective projects would fulfill this target, by creating 320MW of renewable generation, and save 500MW of gas.

2 Prospective projects

2.1 Emergency diesel generating stations

The city would need about 10MW of emergency generating stations to keep local government and essential municipal services running in the event of the grid black outs. This would supply emergency lighting and keep computers and phones working in town halls, council offices, and other places. These stations should be backed up by large diesel reserves, sufficient to keep them running for at least a year. Woking Borough Council have done this, and should be used as a model. A site visit there should be organised.

2.2 Onshore wind farms

The city is blessed with abundant wind, being on the coast, and has good sites for onshore wind turbines, such as on the south side of Aldrington Basin, on municipal land at Sheepcote Valley, in municipal farms, and on suitable parts of the South Downs. 40MW should be created by 2015.

2.3 Photovoltaic (PV) generators on dwelling houses

Brighton is aptly named 'Bright town' and should aspire to become the solar city of the UK because it has the greatest potential for solar power of any UK city. It is on the south coast where the sun is at its highest altitude, and it has a high sunshine level due to less cloud cover than inland towns. There are 120,000 homes in the city. The target should be to install PV panels on half of these ie 60,000 at 2 kW per home on average, totalling 120MW.

2.4 Photovoltaic (PV) generators on business and corporate buildings

There are 3,000 corporate buildings which are suitable for the installation of PV panels at an average of 20kW each, totalling 60 MW.

2.5 Offshore wind generators

The council should support E.on in their plans for building 660MW of offshore wind turbines 15 miles off the Sussex coast, known as the Rampion project. Some of this power (at least 100MW) should be landed at Shoreham power station busbars, or at Fishersgate substation, to supply the city. E.on's present plans are to transmit all the power to Bolney substation, 20 miles north of Brighton, and transmit Brighton's share back to Fishersgate. This transmits it 40 miles un-necessarily, which is wasteful because of losses in transmission. The council should lobby E.on to change this plan to avoid this waste.

2.6 Combined Heat and Power /District Heating (CHP/DH) to heat 100,000 buildings in the city

The electrical demand of the city is about 300MW, which is generated from gas at Shoreham power station, which has a peak output of 450MW. It uses 1,000MW to do this, of which about 500MW goes into the sea as cooling water. This hot water could and should be piped under the roads of the city in plastic pipes to keep the radiators and water tanks hot in 100,000 homes and businesses. Such a scheme is called 'Combined Heat and Power/District Heating' (CHP/DH) Many cities in Continental Europe are heated in this way. This would reduce the gas demand of the city by about 500MW.

The first step is to commission a feasibility study, in conjunction with the owners of the station (Iberdrola/Scottish Power) The terms of reference should ask: 'At what world price of energy

would the CHP/DH scheme become economically viable?' If the answer is: 'At \$100/barrel crude oil', the council could then implement the scheme when the oil price exceeds that level.

2.7 Convert all municipal and public transport vehicles to electric by 2020

To avoid our current dependency on Middle Eastern oil, and once our electricity is renewable, all our buses and municipal vehicles should be converted to electric drive. These would plug into the grid, which would be powered from the above renewable sources. The electric vehicle technology is well advanced, and is expected to be deliverable in the next five years. All businesses should plan to go all electric by 2020.

2.8 Energy efficiency savings in energy demand

We welcome the government's Green Deal initiative, which starts in 2012, and the Energy Bill announced on 9.12.10. This will enable private companies to make energy efficiency savings available to all at no up-front cost. The work to upgrade the property will be paid back from the savings in the energy bills. The following measures should also be implemented by the council:

- a) The council should install LED traffic lights throughout Brighton & Hove.
- b) The council and businesses should loan out smart electricity meters to households to educate them where they could make savings.
- c) The council should minimise travel by maximising telephone / video meetings and conferences.
- d) The council should promote turning down thermostats and wearing more clothes in winter.
- e) The council should bring all its buildings up to high thermal insulation standards, and urge citizens to do likewise.

3 Recommendations

We urge the panel to:

- a) Warn citizens of the vulnerability of energy supplies to price hikes and shortages.
- b) Urge citizens to support the above renewable energy projects which will reduce the City's dependence on foreign suppliers.
- c) Urge citizens to reduce their own energy demand. The better prepared each unit (family, business) is, the less the suffering will be when the price of energy increases, as it surely will. We are all addicted to fossil fuels, and the withdrawal will be painful. The sooner we start, the less the pain will be. Every crisis is an opportunity, and the energy crisis is a great opportunity to create new jobs.
- d) Convey to citizens the opportunities initiated by the Green Deal.

Appendix 9 –Written submission by the Hove Civic Society

Brighton and Hove Scrutiny Committee
Submission by Hove Civic Society

Hove Civic Society – what we do and why.

Hove Civic Society has as its mission: **Hove Civic Society encourages high standards of architecture and town planning and the conservation of buildings of historic interest throughout Hove.**

We now believe that this encompasses more than just the physical appearance of buildings but also their function and indeed the function of the city as a whole. High standards of Architecture and Town Planning means looking at the functionality of the city and its buildings and not only the visual impacts – this means also looking at transport and other infrastructure implications.

We would define High standards of Architecture and Town Planning as buildings and a future townscape that are pleasing to the eye, that function well, where the additional pressure on the existing transport infrastructure can be accommodated and where the energy impacts of new developments are negligible or even beneficial.

We believe that high standards of town planning need to concern themselves as much with the underground infrastructure we install, energy services in particular, as with the above ground visible manifestations of new development.

This realisation has led us to expand our activities:

Our **core work** hitherto has related to commenting on new development proposals covering the Hove area. We are one of the groups represented on the Conservation Advisory Group, a group serviced by the Council.

Depending on the voluntary effort which we have been able to put in we have sought to extend our observations to the wider Hove area and not just conservation areas. We have just completed a 9 month blitz on new proposed residential developments. We observe that new private dwellings permitted in the city generally are of a lower space standard than the minimum standards set for public sector housing. We are now campaigning for setting minimum standards for all dwellings as we firmly believe that we are otherwise building the slums of the future. This is another example of our definition of good town planning.

We have decided to deal with the **renewables agenda** in a focussed way by setting up a subgroup (Renewables Infrastructure Group) that will explore how we as an amenity society can influence a better renewables performance in the City and I will come back to this in a moment – as this is the core of our submission.

We are also expanding into other areas relating to good town planning. For example we intend to launch a campaign for the restoration of our **victorian tree heritage** which is key to the city's biodiversity and also general amenity. We are also preparing for an initiative on **public art** in Hove, which is sadly lacking.

To round off the Society also runs a number of services for its members including an **annual winter lecture series**, a news letter and organised tours. 2011 is the 50th birthday of the Society.

The Renewables Infrastructure Group (RIG)

RIG has been up and running for some three months now under the leadership of John Kapp. The group seeks to bring together interested residents and specialists in the field to help structure

proposals, respond to development proposals and to lobby for changes necessary to make Hove and Brighton more sustainable from an energy point of view.

If we were to use a catchphrase for the aim of the group it would be : Solar City of the UK

Our programme for 2011 comprises the following elements:

1. An initial draft strategy with an aim to maximise local energy generation. This will evolve over time. We have provided in our submission the key components of such a strategy and we are happy to respond to any queries on this. The strategy is informed by concerns about energy security and the increasing need to deal with energy needs locally.
2. Attracting funding for research and action in the field – we are working with Brighton University on a lottery bid, with our part dealing with the issue of hard to treat homes. I will come back to this later on.
3. We have started to monitor planning applications and will benchmark against the best sustainability examples in the city – again more about this below.
4. We are planning for a lecture series on energy efficiency and renewables city wide and at the individual building level.
5. Finally as we develop our stance we intend to engage other Amenity Societies to join us in our efforts.

Let me now come to the opportunities and barriers as we see them.

Opportunities and barriers to renewable energy in the city

Up front I need to emphasise that this is a journey of discovery for us and that we are all learning, hopefully fast enough.

Opportunities and barriers to implementation often hang together so let me deal with some we have come across:

1. The key opportunities in the year to come for renewable energy in the city are the proposals by Eon and the proposal for a Biofuel plant a Shoreham harbour. Both are needed, but need to be implemented carefully – we would like to be able to support the proposals and help iron out any potential problems.
2. We believe that the proposal for ZEDPort could be a god exemplar for the city which again appears to merit strong support.
3. One of the key energy leakages in the city relates to the Shoreham power station – which according to various estimates might dispose of as much heat as is needed to heat the entire city. In technically more advanced cities this would be a simple issue of connecting to a district heating system. Here we need to start from the beginning. We believe the matter needs to be seriously examined again – especially against the likelihood of future potential fuel price rises and gas shortages. This to us is the potentially biggest gain for the city – but it needs an up to date examination and serious commissioned work. Perhaps developing an embryonic district heating system with linkages between major boilers might be a first step. We believe the infrastructure part of the Local Development Framework (LDF) needs to address this in some considerable detail and we have made representations accordingly.

4. When it comes to individual householders and businesses in the city we have made the following observations. Much of the Hove housing especially south of Old Shoreham Road is pre 1919 aligned along roads that lead to the sea – roads are North South and hence the major available roof areas for renewables installations are East or West facing – less than optimal. In addition a very large proportion of this stock is what I would define as hard to treat (Georgian, Victorian, Edwardian). Our stance at the moment is as follows:
 - We would like to be able to advise members on where they can get good service for retrofit – over and above loft insulation; sympathetic treatment of doors, windows, internal and external wall insulation – with a reasonable guarantee that work will not adversely affect the 100 year + fabric and its ability to breathe naturally. This is where we are going for a lottery grant, which we believe needs to be followed up by some joint procurement and identification of local suppliers and products that people can use without too much concern. The green deal might be the ideal for implementing an **area wide approach** on this.
 - As far as renewables are concerned we need to carefully think through what we can tell our members and local residents and what one could achieve a major impact in the area and this is something we will want to mull over.
5. In terms of planning applications we believe there are major cumulative opportunities. Our intention is to gather evidence as to what is achievable and to draw attention to opportunities in development proposals that don't meet best practice. We hope to be able to work with the Council on approaches in terms of planning policy, perhaps using the provisions of the Localism Bill to employ the planning process to achieve optimum outcomes for example in terms of energy efficiency of new developments.

Thank you