

Nuclear Free Local Authorities **briefing**



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No.125

Subject: Development of Local Authority Energy Service Trusts / Companies – part of the answer to a new energy revolution?

1. Introduction

This report has been developed by the NFLA Secretary, on the request of the NFLA Steering Committee. It seeks to provide member authorities with information on the ongoing development by a number of Councils of what are being called either 'Local Authority Energy Service Trusts' (LAEST's) or 'Energy Service Companies' (ESCO's); and the wider context of local authority energy policy. These embryonic developments are a clear sign of interest from Councils in taking a more active role in energy policy, to alleviate local fuel poverty and promote a low carbon future.

Though these policies are at an early stage at present, such developments are part of a growing move in local government to develop more comprehensive energy policies. To some extent, they are influenced by the positive role local government plays in countries like Germany, Denmark and Austria in developing ambitious local, community owned renewable energy projects.

The NFLA Steering Committee welcomes the development of such projects as part of what it would see as its preferred energy policy for the UK and Ireland – a combination of a wide renewable energy mix, a promotion of energy efficiency demand management tools and the development of decentralised microgeneration projects. This report follows on directly from a whole suite of NFLA Policy Briefings on how Councils are playing a proactive role in developing nuclear free, fossil fuel free, renewable rich energy alternatives. (1) The NFLA also recommends reading a similar, influential report by IPPR on how cities can develop local energy policies. (2)

2. Executive Summary

This report outlines the background, policy context and mechanics for the development of more definitive Council energy policies. It also provides local and international case studies.

Section 3 of the report provides the historical context to local authority involvement in energy policy, and why there is increased interest in this area at present. Section 4 of the report goes on to consider the wider policy context for developing a local authority energy policy, amidst concerns over the current energy market structure in the UK and Ireland.

Sections 5 - 8 of the briefing focuses on the step-by-step issues in either developing an ESCO or projects to promote local renewable energy and energy efficiency solutions. It also provides some case studies of leading Councils who are moving steadily towards developing such models. It also suggests there may be different types of ESCO's / energy models, depending on the type of, and the resources of, a Council.

THE LOCAL GOVERNMENT VOICE ON NUCLEAR ISSUES

Section 9 and Section 10 focuses on recent influential reports by the IPPR and the Green New Deal Group encouraging Councils to be given greater powers to develop ESCO's.

Sections 11 and 12 brings the debate up to the present and considers the reaction and appetite in central government, devolved governments and the opposition political parties in seeing the development of such low carbon energy policies and projects.

Section 13 provides some leading case studies of how local authorities in Germany, Denmark and Austria are key players in the development of highly ambitious renewable energy policies.

Section 14 and Appendix 1 refers to some recent examples of local authority energy projects, to emphasise the sheer range of Councils involved in this policy area.

Section 15 provides some conclusions and recommendations to NFLA members and local government in general in England, Scotland, Wales, Northern Ireland and the Republic of Ireland.

3. The historical context – local municipal water, electricity and gas boards – and its importance to today's energy dilemma

The potential development of a new form of 'municipal enterprise' in energy policy harks back to a previous era when it was common for local corporations to run local water, gas and electricity boards. Indeed, all the large towns and cities of the UK and Republic of Ireland played critical roles in developing local energy infrastructure in the nineteenth and twentieth century. Such companies were eventually regionalised and then nationalised after the Second World War. These regional entities were then privatised in the 1980s onwards, and most of them have come eventually under the control of the 'big six' utility companies – Centrica British Gas, EDF, Npower, E-on, Scottish and Southern, and Scottish Power. (3)

Municipal enterprise still exists in local government in a variety of forms. An excellent example is the highly successful Manchester Airports Group (MAG). This is a joint venture, 35% of which is owned by Manchester City Council, 29% owned by the other 9 Greater Manchester Councils and 35% by the private IFM Investors group. It owns Manchester, Stansted, East Midlands and Bournemouth Airports, making it the largest UK-owned airport operator. (4)

Potential ongoing moves by central government to devolve more powers to Councils to promote local economic development may allow for a renewed move towards also developing new employment opportunities and energy generation through entities like Energy Service Trusts / Companies. It may be possible that new local energy models could be a significant part of the solution to deal with today's pressing energy dilemma of reduced energy security, the difficulties in producing large-scale low carbon energy solutions and the need to try and keep energy bill costs down for all energy customers.

Despite considerable devolution in Scotland, Wales and Northern Ireland, and some funding streams and powers being devolved to local government in England by the UK Coalition Government, over 60% of local government budgets are still controlled by the central UK government. In late 2013, the UK Parliamentary Department of Communities and Local Government Select Committee invited submissions to examine whether, and how, fiscal and financial powers could be passed to London and the English cities. In statements across the political spectrum, it looks eminently possible that the manifestos of most political parties for the 2015 UK general election will commit to encouraging a greater level of local 'devolution' to Councils or City Regions. Energy policy could be a component part of such devolution. (5)

In Scotland, Wales and Northern Ireland similar calls are being made of the devolved governments to be given greater powers and encourage more financial freedom for local authorities in areas like energy policy. (Obviously the Scottish independence referendum vote would markedly change matters in Scotland, but there is already cross-party support in Scotland to encourage Councils to actively promote low carbon energy projects).

In the Republic of Ireland, local Councils are involved in a limited way with the planning system in promoting sustainable energy projects. The Sustainable Energy Authority of Ireland has developed over the last decade a 'sustainable energy zone' in Dundalk (which has some cross border co-operation with Newry & Mourne District Council) to create a more holistic approach to energy efficiency and local renewable energy promotion. (6) Seven other Councils have been selected to develop similar projects around the country. (7) The wholesale reorganisation of local government in both Northern Ireland and the Republic of Ireland in 2014 is bringing in a new duty of 'community planning' to councils. The NFLA has recently put forward detailed comments to the Republic of Ireland Government in its Green Paper on the 'Future Direction of Energy Policy in Ireland'. The NFLA advocates that the Government encourages a more active role in energy policy from local councils (8).

The former editor of the Local Government Chronicle, Richard Vize, in his assessment for 'The Guardian' on local government's role in energy policy argues:

"Energy is yet another example of a part of our lives which few perceive as being a local authority responsibility, yet which depends in a myriad of ways on council action. As the government searches for a way through what may be decades of energy shortage, local government's ability to change behaviour and consumption needs to be central to its deliberations." (9)

In previous NFLA policy briefings on energy policy, it has welcomed the bulk-buying energy schemes many Councils have developed, often in combination at a county or city region level, which have proved successful in reducing the bills of participating Councils, and large numbers of residents who have also signed up for them. The large number of such schemes across the UK is symptomatic of the interest of many Councils in becoming much more involved in energy policy to assist in the alleviation of fuel poverty. It is also a clear example of Councils becoming more interested in influencing wider energy policy amidst concerns that the energy market is not functioning effectively or fairly. (10)

4. A broken energy market?

Across the UK and the Republic of Ireland there has been a growing disquiet with perceived failings in the energy market and the escalating costs of energy. Within the local government sector, Councils are increasingly concerned that the market is not just 'broken' but is failing local communities, particularly the poorest groups suffering from increased levels of fuel poverty. (11)

The Association for Public Service Excellence (APSE) has been so alarmed by these issues that it has developed a Local Authority Energy Collaboration Programme to look at ways to respond to 'market failure'. (12) At a national level in the UK, a current and ongoing discourse has taken place over the cost of energy. This debate was ignited in September 2013 by the Labour Leader's Ed Miliband conference pledge to freeze energy prices and reform the energy market, if Labour was to win the 2015 general election. (13) In what was seen by media commentators as a partial response to public opinion surveys advocating cuts in electricity bills and Labour's policy announcement, the Chancellor's Autumn 2013 Financial Statement and the March 2014 UK Budget Statement brought urgent reforms to the 'green taxes' (the energy company obligation or ECO) regime within energy bills in order to provide a short-term one year cut of around £30 - £35 to electricity bills.

This reduced the effect of planned 5% – 8% increases in electricity bills by the 'big six' energy companies, which they collectively argued were being brought in due to significant increases in the wholesale price of gas and electricity. The nature of the privatised UK electricity market means the ECO regime is one of the few areas that the UK Government can directly influence in any attempt to reduce fuel utility bills.

In the NFLA's view, the impact of these changes will involve a highly negative short-term effect on energy efficiency programmes, which in turn will reduce the effectiveness of fuel poverty alleviation programmes. The decision has been called 'perverse' by several national energy conservation groups.

In a joint study by the Association for the Conservation of Energy (ACE), the Energy Saving Trust and the Cavity Insulation Guarantee Agency, they note that the policy change should actually have given consumers a bill cut of £42.50. Yet energy suppliers are only handing back around £32.50, on average, to each household. This represents an aggregate windfall to energy companies of £245 million this financial year alone. ACE argue that the Government's policy may produce a modest short term one-year rebate, but at the expense of permanent energy bill reductions for at least 264,000 households in this year alone (compared to business as usual); a regressive 'double-dividend' for those 50% of British households who have to date received energy efficiency improvements, and higher bills for longer for everyone else. In their view, this creates a bad precedent at a time when the ECO regime was beginning to settle down and run smoothly. (14)

The ongoing public disquiet in opinion surveys over the dominance of the 'big six' energy companies was evident within this 'green taxes' and 'price freeze' debate. In opinion polls energy companies have become highly distrusted by the public in recent years, and particularly over the past year. The extent of this disquiet may be a factor in the Government's recent decision to refer the working of the energy market to the Competition and Market Authority (CMA). (15) This decision followed the publication of a critical OFGEM report which questioned the effectiveness of competition in the energy market. It found "possible tacit co-ordination" on the size and timing of price rises, but it did not accuse the major energy firms of colluding over prices. (16) This review may be part of a wider process over the next couple of years that could see significant changes in the energy market. Local Authorities may be able to take advantage of some of them.

In the Republic of Ireland the Irish Government is currently consulting on how to improve its energy market operating structure in order to produce more low carbon energy sources and improve energy security. Ireland is far more wedded to fossil fuels than most European countries, so this important consultation is seeking to develop a policy to take Ireland forward over the next few decades. The NFLA All Ireland Forum has responded in detail to this consultation, advocating the involvement of local authorities as a key future component of energy delivery. The NFLA submission can be found in NFLA Policy Briefing 124, which is available on the NFLA's informative website <http://www.nuclearpolicy.info>. (17)

5. Why should Local Authorities get more involved in developing energy policy?

Within a policy context of potential future reforms to the energy market, there are a number of obvious reasons for encouraging enhanced local government activity in energy policy. These were summarised in a recent highly informative talk given to the NFLA by independent energy consultant and former senior local government energy policy officer, Stephen Cirell, who is advising a number of local authorities on how to develop such policies. (18)

In Cirell's view, the reasons for Local Authorities to develop energy policies include:

- Local Authorities are large consumers of energy, with a number of Councils now starting to independently produce small-scale energy projects.
- As community leaders, many Councils are concerned with the effects of fuel poverty on their communities and the links this has to the general health and well-being of the locality.
- Local authorities have social functions and high energy costs can clearly impact on these.
- Energy prices can markedly affect the Council's own cost base. i.e. energy prices for Council buildings, leisure centres, vehicles etc; at a time when all Council budgets are under extreme pressure.

Given such factors, many Local Authorities have begun to invest in renewable energy in recent years. As the NFLA's suite of national energy reports over the past few years have emphasised, there have already been many positive benefits for Councils in pursuing these policies, including:

- it shows strong, local community leadership for such policies,
- it brings carbon benefits to the Council as part of a vision to reduce local carbon emissions,
- it has brought tax / financial benefits to the Council,
- it has improved local energy security by not having to rely as much on a third party,
- it has improve the wider effectiveness and efficiency of the Council,

- it has been a positive income generator; which may provide further financial and social benefits to the Council that can be invested into relevant budgets.

As Local Authorities continue to develop local renewable energy projects coupled with energy efficiency demand management policies, many are now at the point of having to decide how far to take this policy further. A step by step process is being recommended across many Councils as a way forward, but significant barriers do need to be overcome.

6. Local Authority Energy Generation and Sales – a step by step process

In Stephen Cirell's paper, there are two main steps required to be taken by a Local Authority prior to the development of an Energy Service Company / Trust.

Step 1 - ENERGY GENERATION to provide self sufficiency

As Section 14 and Annex 1 below outlines, Councils across the UK and Republic of Ireland have been developing ambitious renewable energy projects for some years now. Some of them, like Cornwall County Council's solar park, Bristol City Council's wind farm projects, Southampton City Council's district heating scheme, Glasgow City Council's projects on LED lighting, geothermal power and solar farms, Manchester City Council's innovative work on the development of smart meters and low carbon energy procurement; are already quite substantial and potentially beginning to start generating energy beyond the Council's own specific needs.

In other examples, Councils have only really just started on this journey, and the first step NFLA recommends is for Councils to consider getting to the point of producing enough energy for a Council's own needs. By reaching a target of energy self-sufficiency, the obvious benefit for a Council is that its cost base is significantly reduced; which is clearly important in a time of considerable austerity with local government budgets. This is no inconsiderable challenge though – as Stephen Cirell noted in his talk to the NFLA, for example, when he was the lead officer for Environmental Strategy at Cornwall County Council, it set a target to be energy self sufficient by 2025. The report noted it would require considerable infrastructure investment in order to achieve this target. (19)

Local Authorities do have a number of key inherent advantages in developing energy projects as they possess large amounts of land and significant assets, as well having the ability to access loan deals at cheaper market rates through schemes administered by the likes of the Green Investment Bank or from the likes of pension funds, many of which are owned and administered by joint local authority pension schemes.

Since late 2012, the UK Government's 'Green Deal' has begun to provide financial incentives to local authorities to promote renewable energy projects and energy efficiency programmes. For example, early Green Deal awards in Greater Manchester enabled energy efficiency schemes to be delivered to over 1200 households by the ALMO Northwards Housing and helped to lever in a further £5m of investment. The Government's £10m 'Pioneer Places' Local Authorities fund has also supported 39 projects covering around 150 councils across the country. It has helped support a number of Green Deal Assessments, providing early opportunities for the emerging Green Deal supply chain to be established. (20)

As the Department of Energy and Climate Change has itself noted, many Local Authorities are beginning to develop highly ambitious programmes to embed Green Deal investment. Examples include the Sussex Energy Saving Partnership (which includes three Councils), which is completing the procurement of a Green Deal delivery partner to deliver energy saving measures in more than 680,000 households over the next 25 years, starting with a scheme involving 17,000 homes by 2017.

The 'Warm Up North' scheme (which includes Newcastle City Council and seven other Local Authorities in the North East) has joined with British Gas in an 8 year contract that will cover £200 million worth of energy saving measures for 50,000 households. This is also expected to deliver 500 jobs in the region. Hull City Council has launched procurement for their Green Deal Delivery

Partner to deliver on the Council's existing 3,250 strong housing stock over a period of five years. Similarly, Leeds City Region (working with its 11 constituent authorities) is tendering for a partner to deliver a three-year £100m Green Deal initiative, targeting 12,000 homes, which could create over 600 new jobs across the lifetime of the project. (21)

These positive programmes in energy efficiency are bolstered by many Local Authorities also developing local renewable energy programmes on their own Council assets, as well as developing solar PV panels, microgeneration wind energy, biomass and anaerobic digestion schemes in their localities. All of these programmes are beginning to show that there are potentially good profits and new jobs to be made from energy, as well as social and community improvements.

Step 2 - SELLING YOUR POWER to other customers

A key next step for a Council to consider after generating sufficient power for itself is if it wishes to supply energy to other consumers – whether they are domestic or business customers.

There are various ways that this can be done:

- The export tariff under the Government's Feed In Tariff scheme;
- By way of a wholesale Power Purchase Agreement (PPA);
- By direct wire;
- By setting an internal market for energy within the Council;
- Directly to the public;

The most attractive part of such a policy is to be able to sell power directly to the public. As Stephen Cirell pointed out to the recent NFLA seminar, there are two reasons for this: the first is that this is the best financial return, and the second is that it enables a Council to extract the maximum social value from the electricity and heat that it generates, with critical positives for improvements to its local social policy and the alleviation of fuel poverty.

However, for those Councils who aspire eventually to be players in the domestic energy market there is one specific major obstacle in the Electricity Act 1989. This involves the requirement of around £6 million to pay for the set-up fees, associated costs and registration requirements in order to consider supplying electricity to customers. At present, most authorities are aiming at a lower level of registration for now, with one interesting development the consideration of 'licence lite' type arrangements.

The Greater London Authority (GLA) is in the process of becoming the first local authority in the UK to secure a new kind of "junior" electricity supply licence that will allow it to trade all the small heat and power generation produced by boroughs across the capital. The 'Energy for London' scheme will initially buy power from small-scale generators owned by individual London boroughs and other public bodies and then sell it on to the likes of Transport for London and the Metropolitan Police. The Deputy Mayor of the GLA is currently commencing negotiations to appoint an established power operator to help manage the systems. (22)

The progress of such discussions will be of interest across local government in the UK. Even though the associated costs under the Electricity Act 1989 currently remains a significant barrier, it is one that may be eased over coming years by this and successive Governments if moves to devolve more powers to the Devolved Governments in Scotland, Wales and Northern Ireland and City Regions in England continue to take place.

7. Developing an Energy Service Company

An **Energy Service Company (ESCO)** is a commercial structure, created specifically to deliver a decentralised energy service to customers. It recognises that what clients want is a warm home which is light and has appliances that work, rather than electricity and gas. So, for example while an ESCO may ask a customer to continue pay the same amount each month for energy services, these services may be provided by delivering extra insulation or energy efficient appliances instead of continuing to provide the same amount of electricity and gas. Once the capital costs for insulation and appliances have been recouped by the ESCO, bills can fall.

Developing an Energy Service Company (ESCO) is a prerequisite for a Council when it has started to generate energy capacity in house and is considering trying to break into the complex national energy market. As Stephen Cirell noted in his talk to the NFLA, once some internal understanding and capacity has been created within a Local Authority, moves to develop an appropriate organisation to host this function by moving such energy projects from their own balance sheet to an arm's length company need to take place. This will allow for a greater deal of freedom and flexibility, in the form of an ESCO.

As Cirell notes, the remit of an ESCO can be either narrow or wide in their remit, depending on the level of ambition, and available resources, the Council has with developing such projects. A good example of a more narrowly written ESCO contract is in Aberdeen, where the arms-length company Aberdeen Heat & Power Company has runs its local, and increasingly extensive, district heat network on formerly Council owned social housing properties. Since 2002, £1.6 million has been spent (£730,000 from the Scottish Government's Community Energy Programme) on the scheme. There have been 9 separate schemes funded through this ESCO, which won a Global District Energy Climate Award in 2013. (23)

An example of a wider aspiration for an ESCO is the APSE collaboration, where the functions of the company stretch right into education and support in the community. This initiative sprung up in APSE's Southern region and South West of England region, and its bespoke Local Authority Energy Collaboration (LAEC) is a partnership developed by a core of 11 member authorities seeking to "leverage and maximise the opportunities afforded to local authorities by working together on a national scale in the green energy agenda".

The APSE LAEC works to a vision document as follows:

"To form an effective collaboration of a large number of local authorities to enable and facilitate the local municipalisation of energy services. By this we mean the public and community, as well as private, ownership and managerial control of local energy generation, distribution networks and delivery of energy efficiency works. Local authorities working together in this way would have great influence and would be able to deliver economies of scale in green energy to promote economic growth and combat fuel poverty."

The APSE collaboration is currently working on a detailed business proposal to develop a structure and finance so that an ESCO can deliver:

- Smart clienting in Local Authorities through provision of a range of skills, expertise and research services.
- Negotiation and influence power through the provision of a range of marketing, profile raising and lobbying services.
- Infrastructure projects including renewable microgeneration schemes, energy efficiency projects, energy networks, in addition to supporting demonstrator projects/test schemes.

Councils interested in these developments should contact APSE Energy via Mark Bramah, Assistant Chief Executive on 0161 772 1810 or email energy@apse.org.uk. (24)

Elsewhere, the Core Cities Group (the 8 largest cities outside London – Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle, Nottingham and Sheffield) have been working collaboratively in this area. They all share a mutual interest in developing similar renewable energy and energy efficiency programmes.

Bristol City Council, which was awarded the title 'European Green Capital 2015', has developed an exciting energy vision and, between 2005 and 2009, reduced its carbon emissions in the city by 15%, one of the highest reductions of any major city in Europe. Bristol also has the lowest per capita carbon emissions of any of the largest cities in England. This has been achieved through the Council's Climate Change and Energy Security Framework, which aims to reduce carbon emissions from the city by 40% by 2020. (25)

The plan sees the Council moving forward across all the aspects that an ESCO would be looking to develop - widespread renewable energy production, imaginative energy efficiency schemes and planning policies, greener transport and street lighting, high recycling rates and community action plans. In September 2013 the Elected Mayor of Bristol signed up to the 'Nantes Declaration of Mayors and Sub-national Leaders on Climate Change'. This calls for a new framework for cities to access global funding in order to expand their vital climate actions, and commits local leaders to closer collaboration with other levels of government, particularly at the national level. (26) As part of these developments, the UK Government has awarded Bristol City Council £7 million to support a range of projects including an annual award for the best new clean technology and a series of summits on climate change. This will also assist the Council in developing further its policies and the development of an ESCO.

Nottingham City Council has publicly announced that they plan to launch a more expansive ESCO in 2015. £1 million has been set aside to develop it, with the Council claiming that 177,000 households could be £120 better off once the scheme is fully operational. The not-for-profit independent ESCO will include a high street shop, call centre and specialist staff. (27)

In the initial phase of the ESCO, it will use electricity generated from the Council's Eastcroft incinerator as well as excess power from solar panels, waste food plants and electricity and gas bought from the market at "competitive rates", which will be sold to the public. Any profit gained from the ESCO would be reinvested into electricity supply to build up the company. As a part of generating excess electricity Nottingham is developing two large solar panel "canopies" on top of two car parks, which will earn the City Council thousands of pounds. These schemes are estimated to generate around £121,000 a year for the Council. (28)

Councillor Alan Clark, the Council's Executive Member for Energy and Sustainability said:

"Our aim isn't and never will be to be like one of the six big energy suppliers – we want to be much better than that. The way supply chains work means that we can offer the best possible deals to Nottingham people, including people living in the Nottingham conurbation such as Arnold, Beeston or West Bridgford." (29)

With the growing success of such a venture, it is likely a number of other 'Core Cities' and large cities in England and Wales will follow a similar direction of travel.

In Scotland, Glasgow City Council is also in the final stages of setting up an ESCO which is similar in breadth and ambition to those in Bristol and Nottingham. Glasgow are investigating the development of the ESCO around "an incorporated Joint-Venture model company with the Council and a commercial partner(s) and this structure would limit the liabilities of the partners and share potential dividends between them, ensuring delivery of a fair share of the benefits from energy partners to Glasgow." (30)

In Scotland, the Glasgow ESCO would be procured under the Procurement (Scotland) Regulations. The project development to establish the ESCO is being overseen by a Sustainable Glasgow Projects Officers Group, which would then be superseded by an ESCO Board for governance purposes. Like Bristol and Nottingham, Glasgow is pursuing a number of projects to develop renewable energy such as solar and wind, and has also started to develop and investigate further the potential of baseload geothermal energy in the city. (31)

As an intermediate way forward between these two concepts of a limited and more expansive ESCO model, other Local Authorities are seeking to enter into a Joint Venture with one of the smaller energy companies, such as Good Energy, OVO Energy or Ecotricity.

A good operational example of this is Woking Council's joint venture with Danish company ESCO International A/S (wholly owned by Hedeselskabet Miljø og Energi A/S, a Danish green energy company) under the company name, Thamesway Ltd. This project is financed with shareholding capital and private finance. The joint venture has allowed Thamesway to escape capital controls that would be imposed on a purely local government venture. This allows it to implement larger scale projects, primarily with Danish private finance, with the Council's shareholding capital coming from the Council's energy efficiency recycled fund. Under this arrangement, the local authority ownership must be less than 20%, otherwise Thamesway Ltd would be treated as if it was a local authority company and caught by central government capital controls. Thus, Woking Council owns 19% and the Danish company owns 81% of the private company. This Joint Venture provides green energy services to neighbouring local authorities, public bodies and the private sector both within and outside Woking, all within local government vires. (32)

Individual Councils therefore need to determine the type of venture most suited to their size, ambition and resource capability / potential.

8. Funding an ESCO / energy policy

The development of ESCOs and more definitive LA energy policies has coincided with the worst round of budget cuts forced on Councils in a generation. In the past four years in the UK, and even longer in the Republic of Ireland, many Councils have lost upwards of almost a third of their operational budgets from central government, with the likelihood of further cuts to come.

In such a situation, it could look a quite pessimistic picture for Councils to pursue such policies without new resources. However, developing an ESCO or wider energy policy may not require additional new resources from within existing budgets, as the operation can be initially funded from the renewable energy projects based on the Council's own assets. Many of the examples noted above are being funded in such a way, or from loans from the Green Investment Bank. For medium and larger sized Councils (in terms of population, land and financial budgets), there is likely to be sufficient land and buildings to host reasonably-sized renewable energy projects that could provide significant new income. This income could then be used in order to develop an ESCO and then expand its operation over time, as profits increase.

If undertaken in the manner noted above, such projects may be able to be scaled up quickly. Such projects have an added social benefit of potentially delivering growth and new jobs. As Stephen Cirell noted to the NFLA, it is important to stress that the debt situation should not be an issue, as there should always be an income stream to service the debt charges. The Council's noted above that are beginning to develop ESCOs are seeking to deliver them on this basis.

The NFLA also recommends that Councils consider looking at recent reports published by the IPPR and by the 'Green New Deal Group' in understanding the financing behind developing more expansive local energy projects, and consider in addition how to potentially seek additional funding through the likes of pension funds and the Green Investment Bank. (33)

9. The IPPR Report on how cities can deliver low carbon energy

An influential report by the policy think-tank, the Institute for Public Policy Research (IPPR), focuses on the potential that Britain's largest cities could play in the energy sector. It argues that existing local authority powers could be used to deliver some of these opportunities, but that central government needs to remove some critical policy barriers in order to unlock the potential of larger local authorities to generate and sell energy. It suggests a slightly different strategy in developing an ESCO type approach.

The report highlights five key market failures that could lead to a future energy crisis:

- Low-income households are being overcharged on their energy bills.
- There is a high level of distrust from the public in energy companies.
- There is a major funding gap in green energy investment to deliver the type of infrastructure that can drive renewable energy generation.

- The energy companies driving UK investment are largely foreign owned, meaning many of the supply chains, employees and research and development is not directly benefiting the UK economy.
- Local energy generators are being hindered by an overly centralised market.

IPPR suggest three routes could be used to channel significant levels of finance to local authorities to enable them to become more actively involved in developing ESCO-type models:

- Municipal bonds could be used by local authorities to raise sufficient finance independent of central government. They have been used in the past to develop energy and other types of infrastructure. IPPR argue a group of City Councils could establish a collective bond agency to issue 'green' bonds on their behalf. This would minimise fixed costs and reduce the complexity of issuing single bonds, particularly for low-carbon infrastructure.
- IPPR argue that the 101 Local Government Pension Schemes, who have a collective worth of £150 billion in investments, could unlock a small portion of such schemes for local authority energy programmes. IPPR recommends that individual local government pension schemes should sign up to adopt the United Nations' internationally agreed Principles for Responsible Investment (PRI), so that their investment managers are taking environmental, social and corporate governance into account in supporting low-carbon energy infrastructure.
- The Green Investment Bank should be a key provider of financial capital to Councils for energy infrastructure investment.

The NFLA recommends that Councils interested in moving further forward in this direction with its energy policy should particularly consider the Appendix of the IPPR report.

The Appendix outlines what it sees as the five business model options for Councils getting involved in energy supply –

- being a fully licensed supplier (a full, definitive ESCO),
- going into a joint venture with an independent supplier,
- operating the 'licence lite' approach where the Council becomes a 'junior supplier' taking on some aspects of operational delivery and licence conditions, while a 'senior supplier' takes on the remaining responsibilities,
- establishing a partnership with an existing supplier in which energy is provided using the suppliers existing license and the delivery of operational aspects of the supply business is shared,
- creating a 'white label' – the Council licenses use of its brand to an existing supplier who uses it to market to local customers.

IPPR then argue that a Council should compare each business model according to the following criteria to determine which is preferable to them:

- the ease of setting-up either model in reference to the capacity of the Council,
- the level of start-up costs needed to establish an ESCO or similar scheme,
- the key risks in establishing a new, profitable energy supply business and how to mitigate them,
- the operational complexity of running an energy supply business,
- the potential for income generation,
- the level of control a Council would want of the ESCO or similar scheme,
- the ability to promote local generation and determine local tariffs. (34)

Though this report has been particularly targeted at larger city authorities and city regions, the NFLA believes it to be of real interest to all local authorities. It should also be of interest to central and devolved governments in the Britain and Ireland.

10. The 'Green New Deal' National Plan for local government

The NFLA has also been interested in the views of the Green New Deal Group since one of its founders, Colin Hines; spoke at a NFLA English Forum meeting in Rotherham in November 2011. He outlined how the group, in co-operation with the Energy Saving Trust and Marksman Consulting Ltd, had been previously working with Birmingham and Newcastle Councils to develop a model like an ESCO as noted above.

Using this assistance for example, Birmingham City Council completed a business case using the Green New Deal's Delivery Model in April 2011, with a slight variation whereby the council considered financing 100% of an initial "Pathfinder" 15,000 house core refurbishment programme without bank finance, so avoiding bank fees at start up. It was felt that bank finance or investment from pension funds might be brought in on the extension of the programme to address retrofit to further houses. The programme was extended across the West Midlands and it included over 30 other councils and other public sector bodies. The initial size of the programme was estimated to be £275m with an option to extend to £1.5bn and cover non-domestic public sector buildings. By opening up this programme to other local authorities, Birmingham was also seeking to enable smaller authorities to adopt this model on a low risk basis.

Newcastle City Council also adapted a similar approach to Birmingham and received strong support from partnering local authorities in the North East. Some of the Green Investment Bank schemes noted above have supported moves forward in this area. (35)

In late 2013, the Green New Deal Group published a 'National Plan for the UK' to embed its ideas for local government to be a key partner in the urgent implementation of an interlinked package of measures. These included a systematic programme of investment in green infrastructure of at least £50 billion a year, which would benefit every community in Britain, providing skilled-jobs, making homes warmer and keeping energy costs down. (36)

The Group argued this Green New Deal could be funded through the following measures:

- Tackling tax evasion and avoidance;
- A programme of Green Quantitative Easing (QE), where the Bank of England 'creates' tens of billions of pounds to be used in a targeted fashion to fund a Green New Deal, generating jobs and economic activity that also transform the economy for the future. This is very different from any previous round of QE and has been positively considered by the current Director of the Bank of England; (36)
- Controls to ensure that banks that were bailed out by the taxpayer also invest in such a programme at low, sustainable rates of interest;
- Encouragement for pension funds and other institutional investors to invest in the Green New Deal;
- Buying out the private finance initiative (PFI) debt using Green QE and redirecting some of the otherwise huge repayments into funding green infrastructure.

The group argues such policies would create significant employment. It would also generate wages, salaries, profits and tax revenues – from both the public and private sectors. Tax revenues could then be used eventually to finance the economic deficit and pay down the national debt.

The Green New Deal argues that, by swiftly insulating every home and building in the UK, transforming the UK's transport system for a low carbon future and ensuring maximum efficiency in the use and reuse of raw materials, large numbers of jobs across the country could be created. They also argue that investment in renewable energy could be targeted so that it would help to rebalance the economy away from London, while also providing reliable sources of clean energy and enabling the UK to show global leadership on climate change. Whilst supporting the current UK Government's Green Deal and Green Investment Bank, they are pushing all political parties to push forward with more radical plans, seeing local authorities as a key driver for co-ordinating such plans.

In terms of radical, new ideas to develop an ambitious renewable energy (and non-nuclear) revolution that the NFLA aspires for in the UK and Ireland, the NFLA encourages all of the political parties to consider the innovative ideas of the Green New Deal Group as outlined in their National Plan for deliberation in the process to develop election manifestos for the 2015 general election. It also advocates a similar approach is considered by political parties in the Republic of Ireland, where an even longer period of financial austerity has taken place.

11. The way forward

In the NFLA's view it is essential for local authorities wishing to move in this direction that they understand the value of renewable energy and that they seek to align the corporate agenda and needs of the Councils within its 'green' climate change and energy aspirations. There are already excellent examples of this throughout the UK and Republic of Ireland.

It is critical that local authorities are prepared to use their own financial reserves or borrow sensibly to invest in renewables. Before doing this, it has to carefully understand the risks and be prepared to deal with them in a managed and structured manner. Councils that do so, developing sensible and well-reasoned strategies that include cost effective projects, can deliver expansive local authority energy policies. As this report has shown (and in section 14 / Appendix 1 there are also some practical recent examples), there are already a large number of Councils moving in the right direction, whether they are large metropolitan city councils, county councils or smaller district and borough councils.

However, the NFLA endorses an important view given by Stephen Cirell to its recent seminar. In order to start working effectively on this, there needs to be an internal educative programme to persuade senior politicians and senior officers of its benefits within the Council. This is critical as there has been a growing cynicism around the 'green agenda' with many having a closed mind to its potentially abundant opportunities. In the NFLA's view, such time spent on this activity will be rewarded by significant financial benefits to the Council, and social benefits to the local community, in the medium to long-term.

12. Government policy towards LA energy policy

In the past decade, Governments across the UK & Ireland have increasingly begun to support Local Authorities developing low carbon energy schemes. As the 2015 UK General Election comes near, the manifestos of most political parties could all advocate, to different extents, that local authorities be given more devolved powers to develop schemes such as low carbon energy provision.

For example, the UK Government has started such a process with the first 'Local Growth Deals', unlocking £12 billion of central funds to local authorities to provide support for local businesses to train young people, create thousands of new jobs, build thousands of new homes and start hundreds of infrastructure projects; including transport improvements and superfast broadband networks. (37) As this policy develops it is possible it will envisage support for renewable energy infrastructure projects and the support of community energy projects. Moves for fiscal devolution in England are also being strongly supported by the cross-party Parliamentary Communities and Local Government Select Committee in its report 'Devolution in England – the case for local government'. (38)

The Labour Opposition is advocating similar moves in the final report of its Local Government Innovation Taskforce. This pledges that, if Labour forms the next Government, long-term financial settlements with local government in England, Scotland, Wales and Northern Ireland to plan in a more considered way local infrastructure needs and priorities. (39)

In both cases, the potential for the development of innovative energy policies by local government should be encouraged by Councils and the Local Government Association as policies get developed.

In Scotland, Wales and Northern Ireland there is considerable interest and support from the devolved Governments to promote community energy projects and encourage Councils to become pro-active in this area. All three governments are providing finance to develop community energy projects. NFLA Forum meetings planned in the autumn in Scotland, Wales and Ireland will seek to highlight some of these strategies in more detail.

In the Republic of Ireland, as noted previously, the Government is currently consulting on future energy policy within a Green Paper. This advocates a major promotion of low carbon renewable

energy projects, energy efficiency and microgeneration. The NFLA has responded positively to this consultation, and has advocated to the Government that it unlocks central finances to newly constituted Councils to develop community energy strategies. (40)

The Governments across the British and Irish Isles appear to want more community energy schemes and more civic energy schemes to happen. In the NFLA's view the next 12 months is the perfect time and opportunity for local government to be lobbying for the development of new and more definitive energy policies, such as the Local Authority ESCO type structure.

13. The overseas experience – Local Authorities delivering nuclear free alternatives

The development of more definitive local authority energy policies has been influenced to some extent by the experience of a number of European countries, particularly the likes of Germany, Denmark, Spain, Switzerland, Austria and Norway. This section outlines in brief how the ambition of local authorities is playing a major part in the development of renewable energy, district heating, microgeneration and energy efficiency programmes. NFLA acknowledges the information provided to it by the Cities for a Nuclear Free Europe (CNFE) Secretariat in Vienna City Council for some of these examples. (41)

German Energiewende –

One of the most dramatic changes in the direction of energy policy in any industrialised state has come in Germany. The “Energiewende” or energy transition has origins in a 1980 study by the German Institute for Applied Ecology, and it was also the title of a German Government Environmental Ministry seminar held in the same year. After a long and protracted discussion within German politics, a growing level of political consensus has steadily emerged and ‘Energiewende’ policies promoting renewable energy and energy efficiency began to be implemented as early as 1998. A key part of the policy’s growing effectiveness comes from this level of political consensus and a gradual reorientation of energy policy from demand to supply coupled with a distinctive shift from centralised to distributed or decentralised generation. Much of the philosophical and political consensus was achieved in the Social Democrat – Green Government of 1998 – 2005, and was cemented in the ‘Grand Coalition’ of the Social Democrats – Christian Democrats of 2005 – 2009.

In September 2010, the policy was taken radically forward by the CDU-FDP Government’s Energy law, which was passed shortly after the Fukushima disaster. It brought in a renewable energy target of 60% share of total energy by 2050, an energy efficiency target of fully insulating to the highest standards 50% of German households by 2050; with an associated research and development drive. Following the Fukushima disaster the German Government also determined that all nuclear plants were to be closed by 2022, as the Government took the view that nuclear energy was overly risky. (42)

Using a combination of policies, including a dynamic and generous rate of interest from its equivalent of the Green Investment Bank (the KfW), (43) generous feed-in tariffs on renewables (particularly solar and wind) and a widespread encouragement of energy co-operatives and local authority schemes; Germany’s renewable energy sector has grown from just 5% of total electricity share in 1999, to 27% in the first quarter of 2014. Indeed, on one particular day in May 2014, 74% of Germany’s electricity needs were met from renewable energy. (44)

Its 2020 target of 35% of electricity coming from renewable sources looks eminently feasible to reach. Decentralised energy has been a key driver of the policy, with local communities, local government and energy cooperatives rapidly expanding. Over 370,000 people were employed in the renewables sector by 2010, and this number has increased significantly since. (45)

A key part of the ‘Energiewende’ in Germany has been local authorities. By 2013, almost half of renewable power capacity was owned by local authorities and local energy cooperatives, with some regions of Germany, containing 20 million of its population, producing 100% renewable electricity. (46)

One of the most obvious Local Authority case studies for the promotion of renewable energy is the City of Munich. The third largest city in Germany, with a population of 1.35 million, in 2009 it set the target of reaching 100% renewable energy supply by 2025. It organises such efforts through the city-owned utility company Stadtwerke München (SWM), which has been set the target of producing 7.5 billion kilowatt hours (KWh) of renewable electricity per year in its own generating plants by 2025. SWM has a budget of €9 billion, which it has exclusively focused on cost-efficient and sustainable projects. It has developed hydroelectric, geothermal, solar and biomass plants, but wind power is becoming an increasingly important part of its strategy.

In summer 2009, SWM acquired five wind parks in Germany. Encompassing 25 wind power plants within the five wind parks, the system initially generated around 100 million kWh of green electricity per year. This meets the annual requirements of 40,000 Munich households and prevents the emission of 90,000 tonnes of CO₂ per year. According to its current forecasts, over 80 percent of renewable electricity will be generated by SWM's own wind parks by 2015. (47)

The projected outcomes of already initiated or delivered projects by SWM will create around 2.8 billion kWh from its own plants, or 37% of Munich's energy consumption by 2020 – significantly more than the requirements of all of Munich's 800,000 households. The holistic nature of this infrastructure investment is a key part of this energy policy – SWM delivers district heating across the city, and its subsidiary company MVG powers much of the Munich underground and tram network. SWM is also separately co-operating with another renewable company, AG, to increase generating potential even further to 3.6 billion kWh by 2020. To achieve such figures in a comparatively short period of time requires strong political and economic leadership at the city council, regional 'Lander' and central government level. The SWM model has become such a market leader that it is also producing renewables across Europe – such as the Gwynt y Mor offshore wind farm in North Wales, the Dan Tysk offshore wind farm in the North Sea, geothermal plants in southern Bavaria providing heat and electricity for 16,000 households and a large scale solar heat plant in Andalusia, Spain producing enough electricity for 33,000 households. It has a scale of ambition far beyond anything that exists in the British and Irish Isles. (48)

Similarly dramatic changes are also taking place in the City of Hamburg, which is seeking to take back control of the local utility grid. After a narrow 'yes' vote in a 2013 plebiscite the City of Hamburg will spend €2.7 billion buying back the power grid encompassing 27,000 kms of power lines, 7,300kms of gas lines and an 800km district heating network from E-on and Vattenfall. Over 70 German municipalities have bought back grid networks previously privatised in the 1990s. The 50 environmental, consumer and church groups that backed the Hamburg 'yes' vote argue the change could generate sales of €1 billion and annual profits of €100 million from grid fees. (49)

These two large examples show the ambitious energy visions of the big cities in Germany, but they are reflective of a trend involving local authorities, big and small. For example, the German State of Schleswig-Holstein, which uniquely has its own Energiewende Minister, announced that in 2014 it will produce as much renewable electricity as it consumes. In what is Germany's windiest area, it is now considering going to a level of 300% renewable, if it can find the customers for its excess energy. Schleswig-Holstein is a predominantly rural state made up of smaller rural local communities that have embraced the political will for rapid energy transition. (50)

Denmark's dynamic district heating plans and Copenhagen's plans to be carbon neutral -

A country with similar highly ambitious policies in moving away from nuclear power and fossil fuels is Denmark. Though currently self-sufficient in oil and gas supplies, Denmark's future supplies are expected to significantly decline. This is a major driver behind its embracing of a wide and expansive renewable energy policy. Denmark already produces more wind energy than most European states – at over 30% - and in 2011 the Danish Government launched its 'Energy Strategy 2050'. This aims to make Denmark full independent of fossil fuels by 2050, with an equally ambitious target of wind power to provide 50% of Danish electricity needs by 2020. (51)

Previous NFLA energy briefings have outlined Denmark's expansive district heating system, which is the largest and most advanced in the world. (52) This briefing seeks to highlight the

plans of the capital city Copenhagen, whose city council has set in place policies aiming to make it 'carbon neutral' by 2025.

The City Council's Energy Plan, approved in August 2012, seeks to replace use of coal power in the city with biomass, add significantly more wind and solar electricity to the local grid and encourage its citizens from use of their cars to public transport and bikes – 85% of Copenhagen residents will be within 650 yards of a metro station by 2018, and the city has 249 miles of cycle tracks for over 20,000 residents who daily commute by bike to work.

Copenhagen has reduced its carbon emissions by 21% from 2005 to 2011, with initiatives in place to reduce another 1.5 million tons of carbon dioxide emissions by 2025. The City Council is planning to add at least 100 wind turbines to the grid over the next dozen years, and export excess wind electricity to other parts of Denmark in order to offset Copenhagen's remaining several hundred thousand tons of transportation emissions.

As NFLA have previously advocated for the UK and Ireland, the Copenhagen City Council plan focuses on a transition to less carbon-intensive ways of producing heat and electricity through a diverse but complementary clean energy supply: biomass, wind, geothermal, district heating and solar. As Jorgen Abildgaard, Executive Climate Project Director for the city of Copenhagen says: *"The Danish energy system is very much a systems solution – it's not power as one, and heat as one – it's integrated."*

A core part of the plan is the Adelgade district cooling plant, which provides heat across the city and is part of Denmark's innovative district heating and cooling plants. This plant draws cool seawater from an intake pipe located close to the Nyhavn Canal and then delivers the chilled water through insulated pipes to buildings. These pipes are located below ground in the same tunnels in which steam is distributed via Copenhagen's district heating network. The city estimates that district cooling reduces carbon emissions by nearly 70 percent and electricity consumption by 80 percent compared to conventional air-conditioning. (53)

The city also plans to convert its two combined heat and power (CHP) district heating plans from coal to biomass using wood chips and straw as certified sustainable by the Danish Energy Association. The City Council is also looking at developing an ESCO with private companies to retrofit energy efficiency measures in older buildings. Furthermore, the Council is seeking to have 85% of its vehicle fleet run by electricity, hydrogen or biofuels.

Of course, the cost of such measures is not cheap. The Council plans to invest \$472 million through to 2025. Private investment on the back of these measures pushes the total investment up to \$4.78 billion in the same period. The Mayor of Copenhagen Frank Jensen argues: *"We can see that we have to invest a lot of money to reach the target. But we can also see that we can create a lot of new jobs with that huge investment. Copenhagen can be a green laboratory for developing and testing new green solutions."* (54)

Austrian cities renewable plans: case study of Vienna -

The final case study in this briefing is Austria. In 1978, the country decided in a referendum not to build nuclear power stations and since then, Austria has been one of the most dynamic advocates of renewable energy and energy efficiency.

Following the Fukushima disaster in 2011, Vienna City Council wrote to cities across Europe advocating joining a new network opposing new nuclear build by developing dynamic renewable energy and energy efficiency programmes. The Council is the Lead Secretariat of the Cities for a Nuclear Free Europe (CNFE) Network, of which the NFLA is its UK and Ireland partner. In December 2014 it is inviting cities to Vienna to discuss their energy plans over the next decade.

Pursuing many policies similar to those noted above, Vienna City Council is also particularly well known for exacting standards in environmental protection. The City has developed 36 individual packages within its Climate Protection Programme KliP, which has reduced its annual carbon dioxide substantially, ensuring it has the lowest carbon dioxide emissions per capita in all of Austria. This has been achieved by the large-scale development and expansion of public

transport and district heating, the doubling of subsidies for solar energy, and the thermal renovation of residential buildings. (55)

Since 2004, the Council has instituted the 'Okokauf Vienna' scheme to promote ecological management to procurement procedures. It has assisted in cutting the city's annual carbon dioxide emissions by about 30,000 tons, saving approximately €17 million per year. The Vienna Eco-Business Plan was also launched in 1998 to support eco-friendly and sustainable initiatives by private enterprises and the business community in Vienna. In that time, more than 1040 local businesses have participated in the programme. As a result, they have managed to save about €121.4 million in operating costs, with similar reductions in resource consumption (i.e. energy, raw materials and water) and waste output. (56)

Vienna was also one of the first European cities to develop an Urban Energy Efficiency Programme, agreed by the City Council in 2006. The Programme assists across all sectors of the city - households, public buildings, private businesses, manufacturing enterprises, agriculture and transport. Led by the City Council, the Plan seeks to provide sustainable energy cuts of 15 gigawatts of energy per year. (57)

14. Some current examples of local authority promotion of dynamic energy solutions

Whilst the development of Local Authority Energy Service Companies / Trusts is beginning to develop, the NFLA is always keen to promote the many current examples of Councils around the British and Irish Isles developing and promoting renewable energy schemes, dedicated energy efficiency programmes, community district heating systems and community-supported microgeneration projects that are the initial phase in local authority energy generation / community energy schemes. The NFLA Secretary acknowledges with thanks information provided by the NFLA Scotland Policy Advisor for these examples. Councillors and council officers are welcome to receive such regular updates through the 'Microgeneration Scotland' (which covers all the British and Irish Isles) news service and the 'Towards a Sustainable Cumbria' website news service. Contact the Policy Advisor on rochepete8@aol.com to register. A full list of recent examples is attached at Appendix 1 below.

15. Conclusions and recommendations

NFLA is an organisation that consistently raises concerns over the development of new nuclear. This report very much focuses on its alternative energy vision for Britain and Ireland – a wide renewable energy mix, concerted energy efficiency programmes and support for community energy microgeneration schemes. The report now moves the NFLA a step further forward by seeking to emphasise the positive role local authorities can actively play in promoting this policy. Pursuing such policies can assist in moving England, Scotland, Wales, Northern Ireland and the Republic of Ireland away from a centralised 'baseload' dependent energy policy to a more decentralised energy model. NFLA argue this can provide greater energy security, whilst encouraging low carbon solutions and seeking to mitigate more directly and effectively with local incidences of fuel poverty.

While some of the leading local authorities in this area are some of our largest cities, this report also highlights that ambitious energy strategies can also be developed by county, district, borough and island councils as well. In the examples provided in the report, senior councillors and officers have developed carefully considered strategies and sometimes taken external advice. It is also fair to say that all Councils that have undertaken a substantial renewable energy scheme or energy efficiency programme have reaped significant practical, social, environmental and even economic benefits from them.

The next stage in this process is for Councils to consider developing more comprehensive and joined-up energy policy frameworks, such as an ESCO. Again, these will have to be considered carefully, and Councils are encouraged to look at the likes of the IPPR report, the Green New Deal report and international examples from the likes of Germany, Denmark and Austria. Discussions through organisations like APSE, the Core Cities Group, Local Government Associations in Britain and Ireland, and with central and devolved governments are required to

develop resilient ESCO models that are both cost effective and manage risks carefully. If local government is to persuade national and devolved governments to allow this policy to develop further it does require some Councils to be bold and push forward with more adventurous models.

Local authorities should also look much more seriously at supporting extensive energy efficiency programmes in their localities, which have a particularly beneficial role in the alleviation of fuel poverty.

Within this positive emerging policy culture, NFLA supports the IPPR recommendation that a Local Authority Energy Unit should be created in the UK and Republic of Ireland Energy Departments, and in the relevant departments of the Scottish, Welsh and Northern Ireland Governments to provide advice to central and local government on taking such policies noted above forward.

NFLA also encourage local authorities to work with the Green Investment Bank to deliver local, low carbon infrastructure without negatively affecting local government budgets. NFLA supports the recent initiative of the Local Government Association's (LGA) to create a collective agency for the issuing of local authority bonds and particularly green energy municipal bonds. With open and transparent corporate governance, such bonds are likely to instil widespread investor confidence. Other national local government bodies should look at the LGA's plans. (58)

NFLA also supports the IPPR recommendation that central government should ensure that, if such bonds are developed, then fiscal rules are needed to ensure local debt for capital expenditure does not count against legitimate targets to bring current spending back to balance in the medium term. This allows sufficient time to build up local low carbon energy infrastructure. (59)

In the NFLA's view, with the required political will, considered strategic decision-making and careful risk management reduction, ESCO's and similar local authority energy schemes can be successfully developed within the next few years. Though the ambitious energy policies of the likes of Munich, Copenhagen and Vienna may be hard to emulate in sheer scale, it is clear that local government can play a positive role in the strategies needed to reduce carbon emissions, increase energy security and provide cost effective energy to local communities. This can also have a significant effect on reducing fuel poverty. Such policies could significantly increase local job creation and potential revenue. Councils should look very seriously at such potential developments.

The NFLA Secretariat recommends to its members to disseminate this policy briefing to lead / Executive members for energy and environment policy, senior energy and environment policy officers and procurement strategy officers.

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- (49) Bloomberg.com, 'Hamburg backs EU 2 Billion Buyback of Power Grids in Plebiscite', 23rd September 2013 <http://www.bloomberg.com/news/2013-09-23/hamburg-backs-eu2-billion-buyback-of-power-grids-in-plebiscite.html>
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- (52) Look up NFLA briefing.
- (53) The Guardian Environmental Network, 'Copenhagen's ambitious plans to be carbon neutral by 2025', 12th April 2014 <http://www.theguardian.com/environment/2013/apr/12/copenhagen-push-carbon-neutral-2025>
- (54) ibid
- (55) City Mayors.com – Vienna. http://www.citymayors.com/mayors/vienna_mayor.html
- (56) Vienna City Municipality - <http://www.wien.gv.at/english/environment/protection/eco/>
- (57) Vienna City Municipality - <http://www.wien.gv.at/english/urbandevelopment/energy-planning/sep.html>
- (58) Local Government Lawyer, 'LGA Executive approves work towards municipal bond agency', 21st March 2014 http://www.localgovernmentlawyer.co.uk/index.php?option=com_content&view=article&id=17824%3Alga-executive-approves-work-towards-municipal-bond-agency&catid=62%3Aprojects-articles&itemid=30
- (59) See reference (2).

Appendix 1 – Some recent examples of local authorities promoting renewable energy and energy efficiency

There follows below some recent examples of Individual Council and Social Housing Providers promoting projects to develop both local renewable energy and extensive energy efficiency programmes. The list is by no means comprehensive or exhaustive. It is just an indication of the variety of exciting projects that are already underway around England, Scotland, Wales, Northern Ireland and the Republic of Ireland. This list is provided courtesy of the NFLA Scotland Policy Advisor, who maintains two very useful new services – Nuclear News and Microgeneration Scotland. If you would like to subscribe to these services – a donation for subscribing would be welcome – then email rochepete8@aol.com.

Solar Wiltshire

Work on the largest local authority rooftop photovoltaic (PV) system in the UK has been completed at the Northacre Resource Recovery Centre in Westbury and will save £1.5m over the next 20 years. The 1,248 panels cover an area the size of more than seven tennis courts and will generate more than 280,000KWh of electricity each year. This is expected to save Wiltshire Council more than £55,000 and reduce carbon emissions by 148 tonnes. All of the energy will be used on site to power the mechanical biological treatment process used to turn household waste from the region into solid recovered fuel, thus diverting it from landfill.

Edie 13th Aug 2014

<http://www.edie.net/news/6/Largest-local-authority-rooftop-solar-array-goes-live/>

Solar Bath

Bath & North East Somerset Council has completed the installation of solar panels on Keynsham Civic Centre. The 243kWp solar array is claimed to be one of the largest single site, local authority-owned PV systems in the UK. The solar installation was designed and installed by local PV company Solarsense. The 750 solar modules are predicted to generate in excess of 230,000kWh of clean electricity every year – the equivalent of around 70 homes' energy demand. The solar installation forms part of the council's wider £34 million regeneration of Keynsham's town centre.

Solar Portal 5th Aug 2014

http://www.solarpowerportal.co.uk/news/new_keynsham_civic_council_powered_by_243kwp_solar_array_5426

Bradford Schools to go solar

Bradford Council has become the first local authority in the UK to back plans for its schools to run on solar power, as it emerged that nationally just five schools have installed renewables that qualify for feed-in tariff incentives in the past year. The council has passed a motion led by the Green Party to support Friends of the Earth Run on Sun campaign, which will result in it providing technical and financial support to schools wishing to install solar photovoltaics.

Business Green 25th July 2014

<http://www.businessgreen.com/bg/news/2357164/bradford-schools-set-to-go-solar>

Grimsby Solar Park

Residents were full of positive energy as they looked over plans for a solar development on the former Macaulay Lane tip site. A public consultation event was held at the Grimsby Auditorium on Tuesday to let residents have their say. Representatives were also on hand to answer any questions from residents. The owners of the former landfill site have plugged into the idea of making it a solar energy park with 20,000 solar panels and the power to supply nearly 1,500 homes a year.

Grimsby Telegraph 24th July 2014

<http://www.grimsbytelegraph.co.uk/Residents-switch-plans-solar-energy-development/story-21753568-detail/story.html>

First Scottish Solar Park in Angus

BWE Partnership has submitted a planning application to create Scotland's first solar-energy park in Angus. The Aberdeen-based renewable-energy company is looking to build a 19.54-hectare park at New Mains on Guynd Farm, near Arbroath.

Machinery Market 23rd July 2014

<http://www.machinery-market.co.uk/news/7303/Solar-park-for-Scotland>

Newcastle District Heating

A community energy CHP centre is expected to reduce the carbon emissions of an 1,800-home estate by up to 35%. The gas fired system will provide the Scotswood housing project in Newcastle with heating and hot water when complete. The 66-hectare site overlooking the River Tyne is the largest single site housing-led regeneration scheme in the North of England. It is being delivered by New Tyne West Development Company - a joint partnership between Newcastle City Council and developers Barratt Homes and Keepmoat.

24 Dash 28th April 2014

<http://www.24dash.com/news/housing/2014-04-28-Energy-centre-to-reduce-carbon-footprint-by-35>

Solar City Glasgow

Glasgow City Council is about to launch a project to identify sites for solar farms on 400 patches of wasteland scattered across the city. The plan is to install arrays of solar panels to generate clean electricity on vacant or derelict sites owned by the council. The Council has teamed up with Strathclyde University to conduct a comprehensive survey of 550 hectares of city land that is currently not being used to see if they can accommodate mini solar farms.

Sunday Herald 27th April 2014

<http://www.heraldscotland.com/news/environment/revealed-how-glasgow-will-be-scotlands-first-solar-city.24068197>

Bristol Solar City

THE SUNNIEST city in Britain is looking to make Bristol the Solar powered capital of the UK by 2020, says city business leader James Lancaster. The West Country's biggest city recently hosted a three-day conference for solar energy suppliers, installers, and where manufacturers held advice stands on how local businesses can install 1GW solar photovoltaic technologies. The event was organised by the Bristol Solar City initiative and launched by the City Mayor, George Ferguson – as part of the wider Big Green Week festival. James Lancaster, chairman of Bristol Solar City, said: "While an ambitious task Bristol is well placed to meet the challenge. Bristol has shown itself to be a leader in sustainability and renewable technologies; we've been in the top five of the UK's Greenest cities for the last six years and are shortlisted to be European Green capital 2015. Bristol is also the sunniest of the UK's major cities, we have a reputation for making things happen in our communities."

PV Compare 14th Jan 2014

<http://www.pvcompare.net/en/BRITAIN-S-SUNNIEST>

Argyll and Bute goes solar

Argyll and Bute Council has appointed Campbell & Kennedy's energy division, CK Energy, to install solar on eight schools across Argyll and Bute. The solar schools project is designed to help the council achieve its commitment to reduce carbon emissions by 20% and fossil fuel reductions by 12% by 2014. Last year, the council identified the eight schools as suitable projects to receive solar PV against its investment and key benefits criteria.

Solar Portal 24th April 2014

http://www.solarpowerportal.co.uk/news/campbell_kennedy_wins_argyll_and_bute_council_school_solar_contract_3356

Glasgow LED street lights scheme

GLASGOW has become the first UK local authority to switch to low-energy street lights following the launch of a new loan scheme by the Green Investment Bank. The city plans to convert its 70,000 streetlights to LEDs in a bid to reduce costs, energy consumption and light pollution, as part of a scheme that the Green Investment Bank hopes will be adopted by other councils across the UK.

Herald 5th Feb 2014

<http://www.heraldscotland.com/news/home-news/low-energy-street-light-switch.23349673>

Wind Turbines for Glasgow

GLASGOW City Council want to build nine new wind turbines across Glasgow to help cut the city's annual £26million energy bill.

Daily Record 17th April 2014

<http://www.dailyrecord.co.uk/news/local-news/wind-turbines-planned-glasgow-green-3423938>

Cumbria Geothermal Plan

CHEAPER fuel for Whitehaven residents could be an "unexpected legacy" of the town's redundant pits. A potential scheme to extract heat from water and gas in disused mines in Kells has moved closer after a £123,470 funding award. The money, from the Department of Energy and Climate Change to Copeland Council, will be used to look into developing "innovative heat networks".

Whitehaven News 10th April 2014

<http://www.whitehavennews.co.uk/news/cheaper-fuel-bills-thanks-to-mines-1.1128783>

Mid Suffolk Solar council houses

Mid Suffolk District Council has backed the first phase of plans to install solar panels on more than 2,100 council houses in a joint scheme with Babergh District Council. The £7million plan has identified 2,150 south facing properties within the two councils suitable for the panels. Babergh District Council is making a decision on the scheme this afternoon. Councillor Roy Barker, Mid Suffolk's environment portfolio holder, said money earned from the solar panels would more than cover the cost of the scheme in 20 years.

Bury Free Press 10th April 2014

<http://www.buryfreepress.co.uk/news/local/latest-news/mid-suffolk-backs-7million-solar-plans-1-5994070>

Staffordshire Solar Schools

THE FRIARY School in Lichfield is benefiting from a project to install solar panels in 25 schools across the county. The panels are being funded by a community share issue which gives local people the opportunity to invest while the schools gain free electricity. The project, undertaken by GEN Community and Southern Staffordshire Community Energy (SSCE), has seen a 50 kilowatt array of panels installed which has delivered savings.

Lichfield Mercury 9th April 2014

<http://www.lichfieldmercury.co.uk/Lichfield-s-Friary-School-benefits-solar-energy/story-20934436-detail/story.html>

Heat Networks

Plans to help local councils recycle excess heat from industry will take another step forward today, as the government allocates £2.1m for renewable heat network projects across England and Wales. Twenty-four local authorities, including Sheffield, Manchester, Leeds, and Newcastle city councils, will receive a share of the funding designed to slash carbon emissions from the UK's domestic heat sector. Climate Change Minister Greg Barker today confirmed the latest funding round for councils, including awards to Bath and North East Somerset, Blaenau Gwent, Neath Port Talbot and Bridgend, as well as Cornwall and Devon. Westminster City Council, Camden, Hackney and Merton London Boroughs will also receive a share of the funds. The money will be used to create heat networks that can transport heat recovered from industry or from waste to energy projects to provide heat and hot water to local homes and business.

Business Green 26th March 2014

<http://www.businessgreen.com/bg/news/2336269/local-councils-to-roll-out-renewable-heat-networks-with-gbp2m-funding>

Rochdale goes solar

Rochdale Borough Council could develop the UK's first publically owned solar farm in an attempt to become one of Britain's greenest local authorities. Councillors have green-lit plans for officers to look into the benefits of installing a 250kW ground-mounted solar array on council-owned land. The Council has earmarked a one acre site of contaminated land behind the town's leisure centre to host the array.

Solar Portal 21st March 2014

http://www.solarpowerportal.co.uk/news/rochdale_council_considers_publically_owned_solar_farm_2356

Solar Nottingham

Nottingham is planning two large solar panel "canopies" on top of two car parks which will earn the City Council thousands of pounds. On Wednesday councillors approved plans for the first solar array at Queen's Drive park and ride scheme which will generate £121,000 a year for the Council.

Energy Live News 21st March 2014

<http://www.energylivenews.com/2014/03/21/uks-biggest-solar-canopies-to-save-city-33k/>

Solar Swindon

Swindon Borough Council has voted through measures that will allow solar farms to be developed on pre-approved sites under Local Development Orders. Swindon residents will be able to nominate areas of land suitable for solar farm developments which will then be vetted by the council for suitability. If a site is deemed suitable then the council will designate it as permitted development.

Solar Portal 12th March 2014

http://www.solarpowerportal.co.uk/news/swindon_council_votes_to_relax_solar_planning_rules_2356

Sunderland Social Housing goes Solar

Community renewables finance manager, Empower Community has received a £10.1 million loan from a UK institutional pension investor. The 20-year loan will be used to install, or acquire solar arrays for 2,300 homes and six commercial buildings in Sunderland. The arrays will also be managed by Empower Community. The 2,300 homes to benefit from the loan are part of social housing provider, Gentoo Group who provides community care, construction and solar installations. Thousands of tenants will be able to use free solar generated electricity in their homes, reducing bills by up to 40%.

Solar Portal 7th March 2014

http://www.solarpowerportal.co.uk/news/sunderland_social_housing_gains_10_million_solar_loan

London Efficiency Loan

European Investment Bank considers £500m loan to help London boroughs invest in energy efficiency, waste projects and social housing. Businesses and local authorities in the capital could soon have access to a £1bn fund designed to drive investment in greener waste, energy and building projects, under plans being developed by the Mayor of London. *BusinessGreen* has learnt that deputy mayor for business and enterprise Kit Malthouse is working on plans to significantly expand the EU-backed London Green Fund (LGF), from £100m to £1bn in a bid to spur investment in cutting the capital's carbon emissions.

Business Green 3rd March 2014

<http://www.businessgreen.com/bg/analysis/2330926/london-seeks-beefed-up-gbp1bn-green-investment-fund>

Kirklees solar

At the Green Party conference today, Cllr Andrew Cooper announced the country's largest council-led solar panel scheme which will see solar panels installed for 2000 homes in the Kirklees area, West Yorkshire. Green Party councillors won backing for the plan from Kirklees Council, which will create jobs, reduce people's bills and help the UK reach its renewable energy and CO2 emissions targets for 2020.

Yorkshire & Humberside Green Party 28th Feb 2014

<http://yorkshireandhumber.greenparty.org.uk/news.html/2014/02/28/andrew-cooper-speech-announces-2000-home-solar-panel-scheme/>

Leicestershire County Council looks to go solar

Leicestershire County Council has revealed that it is considering installing solar panels on County Hall to help tackle escalating energy bills. The council has to cut £110 million from its budget by 2018 and has identified a range of energy-saving measures that it can implement to help meet this target. Currently the council's energy bills cost £1.5 million every year, with just less than half of that total coming from County Hall alone. Due to the large energy consumption, the council is taxed £600,000 each year in carbon reduction payments. Under the new proposals, the council believes that it can knock £400,000 a year off its annual energy bills by installing a raft of new measures. Chief amongst the new measures is the installation of 600 solar panels on the roofs of buildings at County Hall, as well as other suitable council buildings.

Solar Portal 20th Jan 2014

http://www.solarpowerportal.co.uk/news/leicestershire_county_council_considering_solar_to_combat_escalating_energy

Clydebank goes Solar

A total of 350 homes at risk of fuel poverty have been given a helping hand by Knowes Housing Association after installing solar PV on houses in Clydebank, Scotland. The solar installations are part of a £2 million programme of energy improvements for the housing association over the next two years. The improvements are expected to deliver annual energy bill savings of £70,000. The recent solar rollout saw 350 homes fitted with solar arrays sized between 2kWp and 4kWp, totalling 980kWp of capacity. All of the installations were completed by local installer Edison Energy.

Solar Portal 15th Jan 2014

http://www.solarpowerportal.co.uk/news/solar_pv_helps_protect_350_scottish_homes_from_fuel_poverty_2356

Southampton's Efficiency Plan

Southampton City Council has been awarded a £30 million deal to outsourcing company MITIE to deliver more than 2,000 energy efficiency improvements under the Energy Company Obligation (Eco). The 18 month contract will see MITIE install Eco measures for council tenants and private households. Under the deal, MITIE will also be responsible for the delivery of a district heating scheme for the Thornhill Estate, which will involve more than 1,100 properties.

Utility Week 13th Jan 2014

<http://www.utilityweek.co.uk/Error/AnonymousSubscribe?articleUrl=southampton-city-council-awards-30m-eco-partnership>

Edinburgh Street Lights

A MAJOR overhaul of street lamps across the city will save millions of pounds and help show Edinburgh in a better light, it has been claimed. Radical plans have been drawn up to replace dull sodium bulbs with bright LEDs as part of a £30 million project to bring the Capital's street lights into the 21st century. The energy-efficient bulbs will save nearly 40 per cent on the £2.97m spent each year illuminating the city and are likely to offer even future savings with energy prices expected double in the next decade. To date, a £2.1m interest-free loan has been secured to transform 6000 street lights, but environment chiefs are targeting a city-wide roll-out ultimately costing around £30m.

Edinburgh Evening News 8th Jan 2014

<http://www.edinburghnews.scotsman.com/news/30m-led-lights-project-to-save-city-millions-1-3260632>

Edinburgh Solar Festival City

ROLLING banks of solar panels would be installed in disused quarries and former brings under radical plans to slash Edinburgh's carbon footprint. Nine target sites have been identified within early blueprints – including a 279-hectare swathe of Bonaly Country Park – which could see “meadows” of solar panels fixed for the next 25 years. Just one hectare of solar panels could power 100 homes, and a council report suggests that any surplus energy could then be sold back to the National Grid. Along with Bonaly, other sites include the former tip at Blinkbonny, Torphin Quarry, Blackford Quarry and the Gilmerton Bing.

Edinburgh Evening News 12th Dec 2013

<http://www.edinburghnews.scotsman.com/news/bright-idea-as-solar-power-sites-identified-1-3230432>

Efficient Lighting

London is set for the largest-ever single investment to modernise its street lighting in a move that should reduce energy consumption by 40 per cent. Around 35,000 of the capital's 52,000 street lights will be replaced by energy-efficient LEDs by 2016, while a new system will also be introduced to remotely manage and control lighting levels in line with traffic flows and road usage.

Business Green 3rd Dec 2013

<http://www.businessgreen.com/bg/news/2316434/london-switches-on-to-led-lighting-revolution>

Solar Exeter

Solar panels installed on the roof of Exeter City Council buildings have generated far more electricity than expected. Collectively, the panels installed in March have benefitted from the long, hot summer, generating more than the predicted output for the whole year in the first eight months. The panels, which are fitted at the Council's Civic Centre, as well as at its Oakwood House offices, the Materials Reclamation Facility and the ARK, the Museum's storage facility, cut energy costs as well as significantly reducing the Council's carbon emissions.

Exeter Express & Echo 19th Nov 2013

<http://www.exeterexpressandecho.co.uk/Solar-panels-bring-savings-Exeter-City-Council/story-20099254-detail/story.html>

London Underground – Islington District Heat

The stretch of track between Angel and Old Street on the London Underground might soon provide an answer for local householders suffering from fuel poverty. The connection between the capital's iconic public transport system and its worsening fuel poverty crisis might not seem immediately obvious, until that is you take a look at a new project that aims to capture waste heat from the tube and pump it into homes and businesses in one of the poorest parts of the London Borough of Islington. Islington Council unveiled the £3.9m demonstration project late last week as an extension to its existing Bunhill heat network, where a 2MW combined heat and power plant already provides heat to local properties through a network of pipes. That project is aiming to cut energy bills by up to 10 per cent for 860 homes in the local area, while also curbing greenhouse gas emission, and now tapping into heat from the Tube is aiming to deliver further savings.

Business Green 18th Nov 2013

<http://www.businessgreen.com/bg/analysis/2307459/how-the-london-underground-could-slash-household-energy-bills>

Solar Plymouth

PLYMOUTH City Council has announced it is set to award £500,000 of solar energy business. The decision to award 14 new contracts to provide solar PV installations has been announced. The projects form the next phase of its multi-million pound energy saving programme. Work totalling £527,000 will provide savings on civic energy bills and boost the city's economy with contractors committing to increase Plymouth's 'green' skills base through new apprenticeships and local employment opportunities. The second phase of the programme takes the number of council properties with solar energy from five to 19. Plans include a large installation on the roof of Western Approach car park and most sites will be completed by spring next year.

Plymouth Herald 15th Nov 2013

<http://www.plymouthherald.co.uk/Council-award-500-000-solar-energy-business/story-20086696-detail/story.html>

Birmingham's Solar-powered Buses

Birmingham City Council has unveiled its vision for the future of transport in the city which includes proposals to electrify the entire city's transit network. The Birmingham Mobility Action Plan (BMAP) has been designed to help realise the city's ambition to reduce its carbon output by 60% by 2027. One of the concepts being considered is a solar-powered bus stop that would not only protect passengers from weather but also help top-up the buses' batteries through inductive charging.

Solar Portal 8th Nov 2013

http://www.solarpowerportal.co.uk/news/birmingham_investigates_solar_powered_electric_buses_2356

Local Authority Tidal Power Promotion

Cardiff and Bristol councils are to join forces to champion tidal lagoon technology in the Severn estuary, effectively dismissing the barrage concept as "dead in the water". The cities are in talks about forming a public-private partnership – such as a Special Purpose Vehicle – with stakeholders and other councils to develop tidal lagoons on both sides of the estuary. They hope to use their collective resources to study the potential of the renewable energy technology to harness the Severn's tidal range, the second largest in the world. Cardiff council has already held several meetings with Tidal Lagoon Power Limited, the company planning to pioneer an electricity-generating £550m tidal lagoon in Swansea Bay.

Wales Online 18th Oct 2013

<http://www.walesonline.co.uk/news/wales-news/cardiff-bristol-talks-harness-severn-6201060>

Subway Heating

SCOTLAND'S only subway system is at the centre of a pioneering scheme to warm its stations by using the water leaking into its tunnels as a sustainable heat source.

Herald 14th Oct 2013

<http://www.heraldscotland.com/news/transport/glasgow-subway-is-to-convert-leaking-water-into-heat-source.22406357>

Hartlepool Lights the Way

Hartlepool Borough Council is proposing to replace all of Hartlepool's 13,644 street lights with LED luminaires in a 12-month scheme. The council says the scheme, which it is estimated will cost £5 million, will save the authority between £400,000 and £550,000 a year on its energy bill.

Lighting 10th October 2013

<http://www.lighting.co.uk/news/latest-news/hartlepool-considers-led-upgrade/8654166.article>

Solar farms in Northern Ireland

The UK's biggest developer of solar farms has said it wants to spend £100m developing 20 sites in Northern Ireland over the next two years. Lightsource Renewable Energy Ltd is currently consulting on plans for two large scale farms in County Antrim and one in County Down. One of the sites is 35 acres of land at Aldergrove near Belfast International Airport. The company has said it could generate enough power for more than 1,000 homes.

BBC News Northern Ireland 5th November 2013

<http://www.bbc.co.uk/news/uk-northern-ireland-24815670>