

NFLA Policy Briefing No.191



Date: 23rd September 2019

Subject: Climate emergency – the next steps: a NFLA ‘manifesto’ for dynamic low carbon action

i. Explanation of report

This report follows on from the detailed suite of documents the NFLA have developed to assist Councils in tackling the ‘climate emergency’ by advocating best practice for effective local authority low carbon action. The report has been developed by the NFLA Secretariat and it was profiled at the NFLA Scotland meeting in Dunfermline, Fife on the 19th September.

This report directly follows on from NFLA Policy Briefings 187 and 189 which look at the role local government must take in the huge challenge to tackle the most damaging effects of climate change by reducing carbon emissions as much as possible. These reports have been well received across our member authorities and local government in general. With over half of Councils across the UK, and a substantial amount of Councils in Ireland, having declared ‘climate emergency’ resolutions calling for zero carbon / net zero targets by as early as 2030, this report seeks to answer the question of what Councils could and should do next. For all Councils, whether they have declared a ‘climate emergency’ or not, there are inevitably real and difficult challenges with which to develop effective and comprehensive low carbon, renewable and decentralised energy strategies. This briefing looks at some of the most effective ways forward and NFLA see it as our dynamic ‘manifesto’ for further action.

It is well worth reading the NFLA’s May and August 2019 reports prior to reading this report:

http://www.nuclearpolicy.info/wp/wp-content/uploads/2019/05/A300_NB187_Climate_emergency_renewables.pdf

http://www.nuclearpolicy.info/wp/wp-content/uploads/2019/08/A302_NB189_Ireland_and_climate_change.pdf

1. Introduction

Environmental lawyers from the NGO, *Client Earth*, have written to 100 local authorities across England to warn them that they will violate their legal obligations and risk legal challenge if they do not introduce proper climate change plans. The local authorities concerned are those which are currently developing a new local plan. The lawyers have given them eight weeks (to the end of October) to explain how they will set out evidence-based carbon reduction targets and ensure these targets are then central to their new low carbon planning policy.

Many of the daily decisions around new and existing infrastructure – such as new buildings, roads and utilities – are made at the local level. All of these decisions will ‘lock in’ an area’s future emissions and its resilience to climate change. Local authorities have a legal duty to set targets and policies based on the local potential to reduce emissions at least in line with the UK’s Climate Change Act (i.e. net zero by 2050). The lawyers say that for carbon targets to be meaningful, they need to be incorporated into local planning policy as a core objective against which all other policies and decisions will be tested. Local planning authorities also need to monitor performance against local targets at least annually.

THE LOCAL GOVERNMENT VOICE ON NUCLEAR ISSUES & ENERGY POLICY WITH FORUMS ACROSS THE UK AND IRELAND

C/o Nuclear Policy, Level 3, Town Hall Extension, Manchester, M60 3NY

Tel: 0161 234 3244 E-Mail: s.morris4@manchester.gov.uk Website: <http://www.nuclearpolicy.info>

This demand arises as all local authorities (in the UK and Ireland) face difficult economic conditions and the Local Government Association says they need considerably more money to adopt such ambitious decarbonisation plans. However, it is useful to note that *Client Earth* point out that "there are substantial benefits to climate-sensitive planning, such as improving local economies and creating jobs. Climate action at a local level can transform people's quality of life for the better, with clear net benefits to health, air and water quality, employment, energy affordability, community cohesion and biodiversity." (1)

Meanwhile a group of eighteen civil society organisations has written to the new UK Finance Minister with a costed roadmap to tackle the climate emergency which estimates the government will need to more than double public investment on climate, **from the current £17 billion a year to at least £42 billion, equivalent to about 5% of government spending**, if it is to put us on track to meet its legally binding net zero target. NFLA believe this is a fair and well costed figure for UK Government focus, and it also encourages the Devolved Administrations in Scotland, Wales and Northern Ireland, as well as the Irish Government, to look at the 5% figure as a good starting point for the future.

Their joint letter also argues that properly funded local authorities will help create better, more secure jobs through skills development, retraining and local investment, especially in areas where there are currently workers in high-carbon industries. In addition such policies would create thousands of new jobs, investing in the right infrastructure and making the country a cleaner, healthier and safer place to live. Warmer homes will cut energy bills, as well as the health and economic costs of poor housing, which could be as high as £18.6 billion. Cleaner air will cut costs from air pollution, estimated at £5.3 billion in health and social impacts in England alone. Better public transport will ease congestion, estimated to cost £8 billion per year. Nature restoration will reduce flood risk, boost tourism and improve mental health. (2) NFLA sees obvious benefits in such an assessment.

Producing local plans which are consistent with climate change targets are not the only action local government should be taking. There are lots of other actions which can be done which have minor implications for budgets and which can actually even help raise new funds. This briefing presents some ideas for actions that local authorities could be working on in the immediate future. It also looks at a few recent best practice examples of projects being carried out by local government.

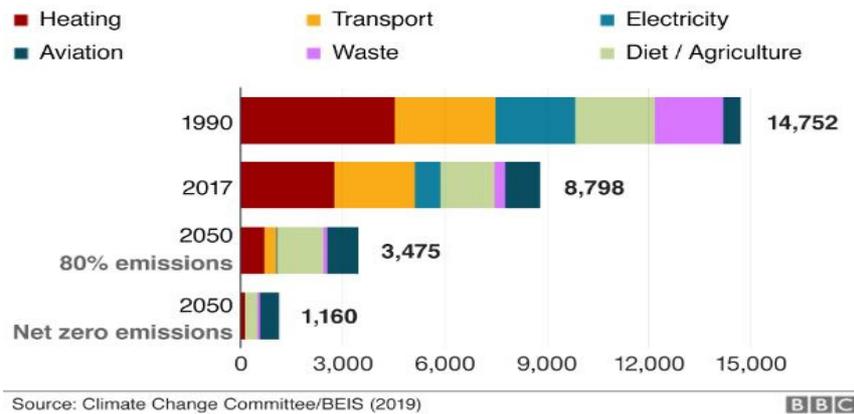
2. **Achieving Meaningful Consent**

The UK Government's Chief Environment Scientist, Professor Sir Ian Boyd, says people are going to have to use less transport, eat less meat and buy fewer clothes, if the UK is to virtually halt greenhouse gas emissions by 2050. He says though the public has little idea of the scale of the challenge presented by the 'Net Zero' emissions target. The problem for the UK, Irish and Devolved Governments is going to be how to persuade people to consume less. (3) The comments by Professor Boyd have already proved controversial with Richard Black of the Energy & Climate Intelligence Unit saying 'big lifestyle changes' was not what the UK Committee on Climate Change (CCC) thought was required. (4) The Green MP, Caroline Lucas reckons the answer has to be to persuade people that they can achieve a better quality of life while consuming less. (5)

The useful table below from the CCC outlines the roadmap that would need to take place in reducing household emissions to net zero by 2050.

Household emissions in 1990, 2017 and 2050

Annual emissions, kilogrammes of CO₂



Putting in place the detailed policies needed to support a ‘net zero’ ambition will require sustained electoral support, but in this age of populism and resentment against the views and attitudes of traditional elites, including academics and scientists, resistance to climate change policies is fast becoming a feature of the ‘populist’ agenda.

This is not just a feature of Donald Trump’s policies in America. In France the ‘gilets jaunes’ movement emerged in response to attempts by President Emmanuel Macron to impose higher fuel taxes and encourage low carbon action. In Australia, hostility to the climate agenda arguably helped swing the general election earlier this year to climate sceptic parties. The Leader of the Brexit Party Nigel Farage made a recent quite public challenge on Prince Charles for his views on climate issues, which also fits in to such a pattern. A number of trade unions have also raised concerns that, unless there is a ‘just transition’ of transforming employment from the fossil fuel / nuclear sector to renewables, many jobs could be lost and not adequately replaced. Therefore, for lots of people, action on climate change has come to represent an ‘elitist’ attempt to take away their jobs and to impose new taxes and higher prices on products that they see an important part of their lives. (6)

In Canada, for instance, there is a loud backlash against new cycling infrastructure despite there being widespread public support for safer cycling infrastructure. For example, last year the Vancouver Mayoral candidate Wai Young vowed that, if elected, she would tear up bike lanes and “free the roads.” Separated bike lanes are: “*a luxurious road system built for a select few, and I do not think it is necessary*” she said. It should be noted though that she came fourth in the election. In Ontario, the Premier Doug Ford and his late brother Rob (former Mayor of Toronto) made their careers railing against the “war on cars”. But in Montreal, which is planning a network of new cycle-ways the council is working hard to counteract opposition - talking to taxi drivers, the truckers’ association and building support among local businesses and residents by going door-to-door. In some parts of central Montreal, 15% of trips are now by bicycle, which is unheard of in North America. NFLA see this as good evidence of the educational role of local authorities in encouraging effective low carbon action. (7)

In the UK the Westminster Government is planning to ban the sale of petrol and diesel cars by 2040 (2032 in Scotland). And by 2050 (or 2045 in Scotland) virtually all buildings will need to be heated without fossil fuels. Both of these major changes could stir up real dissent if they are not introduced carefully. All Councils need to think about a careful strategy of presenting such policies and bringing public support for them if they are to be successful.

3. Making sure the energy transformation is fair and democratic

Thus, if Councils are going to make sure the energy transformation has the public’s support, they need to actively engage people in the process.

Simon Roberts of the Centre for Sustainable Energy in Bristol talks about the need for ‘*meaningful public consent*’. When considering the scale of change that is going to be needed to meet carbon objectives, Councils / government needs to bring the large majority of the community to change

the way they use energy, and make the public aware that a core part of this will require paying for the changes through bills and taxes for a greater benefit. Without meaningful public consent for such change, such successful action is unlikely to succeed. It is important to educate the public of the benefits of this process, ensuring that they feel comfortable with it and are directly involved within it. The public will want to know, in particular, that changes are being implemented in a **fair** way.

The Centre for Sustainable Energy believes such processes need to be done at a local level. It has found that if Councils or other organisations bring a group of people together in a locality and ask them 'how they are going to make a contribution to the changes that need to happen' they come up with sensible and practical answers. The conversations need to start outside of any specific proposals. This could start by asking local people what they value about the place they live in, as well as what needs to be taken into account as they think about how it will change. (8)

As society seeks to decarbonise the energy system it is essential to develop processes that ensures people see it as fair and does not leave any people behind, otherwise it will risk getting rejected. If it is not fair discontent will inevitably grow. A core part of a Council low carbon strategy needs to centre on how it can ensure that people on low incomes can achieve the benefits which energy transformation offers and protect them from some of the disadvantages that might emerge. For example, presently all of us have to pay a share of the cost of reinforcing the local electricity network for electric cars, but in the short term this may be seen as only benefiting the wealthier electric car owner, who might also be making money in selling the electricity stored in the car batteries back to the grid at peak times. As countries seek to transform the energy system there will be new and other ways of generating unfairness. But at the same time it is essential not to stifle innovation. The key will be getting the balance right.

4. Citizens' Assembly

One way Councils may encourage public participation and seek support for dynamic low carbon action is to convene a Citizens' Assembly. An excellent example is the Citizens' Assembly convened by Camden Council. This recently agreed on 17 proposals for action to tackle the climate crisis, including installing solar panels on all available roofs and cutting fossil fuels out of local government developments. The assembly brought together more than 50 residents, randomly selected, and a team of climate experts to develop proposals that could be taken up by the council to reduce carbon emissions and increase sustainability. The proposals focused on housing, transport and green space, and included a community energy scheme to remove fossil fuels from home heating, widespread cycle lanes and car-free zones, and programmes to ensure that all new homes in Camden are built carbon-neutral. (9)

A national climate assembly is planned for by the UK Government this autumn and the example by Camden is being closely watched for the 'do's and don'ts' of this relatively new form of public engagement. (10) The processes undertaken in Greater Manchester and by Manchester Climate Change Agency over the past few years have been quite similar, and Leeds is creating a 'Climate Change Conversation' as well.

It should be noted citizen assemblies are a common platform in Irish public policy when a national conversation is being developed on new or contentious issues. NFLA would encourage the Irish Government / Dail to consider convening such a body with a clear role for local government to play within it.

5. Finding the Finance

One core area for finding new finance that local authorities can pursue is to ensure their pension funds are not being used to fund fossil fuels. Recently highlighted at the NFLA Welsh Forum meeting, the City & County of Swansea Pension Fund is one of the first Council Pension Fund's in the UK to adopt an 'Environmental, Social & Governance' policy which commits the pension fund to reduce its already low exposure to carbon based fossil fuel investments by up to 50% over the next 4 year, thus unlocking considerable new expenditure to spend on low carbon projects.

Previous NFLA briefings (see the annexes) have also detailed various ways in which local authorities are finding ways to find finance for low carbon energy projects. The most ambitious is

probably in Bristol, where the City Council published its City Leap Prospectus in May 2018. This aimed to “to up the pace of delivery to help us meet our 2050 target.” The Prospectus is designed to attract, facilitate and deliver up to £1bn of low carbon and smart energy infrastructure investment in Bristol’s energy system over the next ten years. This has recently been widened to encourage further external investment into Bristol’s low carbon economy.

Other examples NFLA advocate in this area include:

- Setting up arms-length energy companies which can raise their own finance through borrowing against a Business Plan.
- Partnering with community energy companies which can issue shares for renewable energy projects.
- Buying a ready-made solar farm or building a new one, using capital reserves, to generate income.
- Launching a solar bond to fund new solar farms.
- Using a management company who will fund and install solar PV on council-owned buildings – the council benefits from a share of the income.
- Using Power Purchase Agreements to allow renewable energy projects to continue on a subsidy-free basis.
- Using Salix Finance Ltd, which provides interest-free Government funding to the public sector to improve their energy efficiency, reduce carbon emissions and lower energy bills.
- Several innovative projects, for example the Smart Energy Islands Project on the Isles of Scilly, and Nottingham’s “Energiesprong” project which is highly insulating social housing, have been funded by the European Union. Obviously the current debate over whether the UK leaves the EU will determine whether Councils can continue to access such sources of funding, or their successor arrangements. Irish Councils should continue to look at ways to access EU funding.

NFLA also recommend the suggestions made by the Solar Trade Association for local authority financing of renewable projects:

- Reserves – the public sector is hoarding billions according to UK Government ministers. Some projects will come to the fore, so an LA might decide if it can get a better rate of return from, say, a solar park. Three different Local Authorities for example have invested in Swindon’s Solar Park.
- Housing Revenue Account – this could be used to fund solar on rooftops.
- Capital Projects – new solar projects can be used to mop up unspent capital project funding.
- Public Works Loan Board – this could unlock long-term finance at low interest rates. One authority has borrowed at a rate as low as 2.7%., but most will be 3.5-4%. There are a number of ways LA finance teams could look at in how they pay the money back.
- Bond Offers – (as in Swindon) – it has been a long time since public sector projects used this type of finance. Swindon though undertook their bond offer with the company *Abundance*. It was marketed as a partnership with the community. There was a minimum investment of just £5.
- Share Offer – A good example is that there is a £10m share offer in London with a 4% rate of return imminent.
- Joint Venture (JV) – a conventional deployment with a private sector company can reduce capital costs and reduce the interest payments. A JV with a solar company can reduce costs by ‘cutting out the middle man’.
- Commercial borrowing – why – not unless it’s really cheap?
- There is a recent example of an LA pension Fund using funds to finance solar. (11)

Friends of the Earth have highlighted how local authorities need to be imaginative in securing money for delivering low carbon projects - particularly money that can fund on-going costs, such as employing staff (revenue costs). It praises Nottingham’s Workplace Parking Levy and Newham Council’s requirement for every privately rented home to pay for a licence. Funds are used to check on the quality of the homes and whether they meet minimum energy efficiency standards. There are reportedly 55 local authorities using or wanting to use licencing, but they are facing opposition from landlords. Haringey Council uses the requirement in London for zero carbon homes to allow builders to offset the final few per cent of making a home zero carbon through providing the council with money for low carbon action elsewhere (at a carbon price of around £60 per tonne for 30 years). This will soon be extended to commercial properties. (12)

6. Mobilising the billions spent on annual public procurement to support the product and service innovation the climate emergency response needs

The public sector is still buying fossil fuel powered vehicles, building fossil-fuel heated buildings, maintaining many energy-inefficient buildings, commissioning carbon intensive infrastructure projects, serving high-carbon meals, purchasing single-use plastic products and so on, on a daily basis. This obviously needs to stop as soon as is practical – the public sector inevitably needs to put its own house in order.

Public procurement could be used in a long-term and strategic way, to lead and stimulate the development and growth of new markets for climate-friendly goods and services that enable organisations to cut their emissions and help people to lead low-carbon lifestyles. Public procurement could create the market certainty and economies of scale new business approaches need, and this then can even mean new options for consumers.

7. Local Authorities could collectively announce they will no longer be buying fossil fuel powered vehicles

Local Authorities should identify ambitious timescales for all vehicle types.

As well as the more obvious actions such as introducing electric buses, putting in place an EV charging network, and building a cycling and pedestrian-friendly infrastructure, other transport actions could include:

- Ensuring the rapid transition of the council’s own fleet to electric vehicles including vehicles used by council staff but not owned by the council;
- Using the licensing system to ensure that all taxis are electric by a certain date;
- Introducing a differential charging for residents parking permits depending on the cars carbon emissions.
- Support the development of car-sharing.
- Integrate the need to reduce car use into the local plan – this requires a range of measures, including: ensuring dense housing development with quality walking & cycling; restricted car parking provision; the provision of transport & delivery hubs to enable the use of cargo bikes and similar for deliveries.

Dundee City Council (a NFLA member) is now at the vanguard of the switch to zero-carbon transport. It already boasts the largest number of electric minicabs anywhere in the UK (134 at the last count), a council-owned network of four solar-powered charging hubs capable of taking 78 cars at a time (with sites for another 60 being built) and the highest number of rapid chargers of any Scottish city. It will also be imminently opening a rooftop charging hub – solar-powered, of course – at a city-centre multi-storey car park.

Dundee’s ambition is to be fully electric within 15 years. Dundee City Council believes it has the UK’s largest local authority electrified fleet, with 117 electric cars and vans in use. It plans to buy 65 more, replacing its highly polluting diesel bin lorries and road sweepers with electric vehicles, and running subsidised electric minibuses in some of its poorest neighbourhoods. (13) This is the kind of dynamic strategy NFLA would advocate in this area.

8. Signal that city centres will be vehicle emission free by 2030

Low emission zones are already being developed by many Councils. Supporting the decarbonisation of transport by banning petrol and diesel vehicles from entering town and city centres would boost the introduction of EVs. Local authorities also need to work with Government to make progress on the development of EV charging infrastructure. Setting a clear target for local authorities to develop low-emission zones into zero-carbon emission zones (by 2030), would provide a clear, mid-term market signal to vehicle manufacturers, bus companies and freight operators to encourage behavioural change.

9. Promote walking, cycling and public transport

The idea that all that is required is to simply switch our existing petrol and diesel cars into electric versions and carry on as before is unsustainable. The House of Commons Science and Technology Committee says “*the Government should not aim to achieve emissions reductions simply by replacing existing vehicles with lower-emissions versions ...In the long-term,*

widespread personal vehicle ownership does not appear to be compatible with significant decarbonisation.” (14)

The Centre for Research into Energy Demand Solutions (CREDS) warns that electrifying cars will not address traffic jams, urban sprawl and wasted space for parking. (15) Greater Manchester Cycling Commissioner Chris Boardman says electric cars are one of the biggest threats to solving congestion, pollution and obesity caused by an over-reliance on private vehicles. (16) A major problem with electric vehicles is that they still produce particles from brake wear, tyre wear and road surface wear which, according to the government’s Air Quality Expert Group, directly contribute to well over half of particle pollution from road transport. (17)

While it is the case that electric vehicles are much less polluting than petrol or diesel vehicles even when the carbon emissions from making the car’s battery are taken into account (18), it remains clear in the short to medium-term that not all people are going to be able to afford to own one. As a result, some people may be forced to give up their cars and switch to other means of travel. There is though real benefit in encouraging more to do that anyway.

In Germany, as an interesting and relevant case study, the number of registered plug-in vehicles still falls way short of the target of 1 million set for 2020. Instead, there has been a boom in the number of cargo bikes. 39,200 electrically powered cargo bikes were sold across the country last year, compared with only 36,062 newly registered electric cars, in spite of smaller subsidies. (19)

All ‘Zero Carbon’ strategies have to acknowledge ways to actively encourage walking, cycling and improved low carbon public transport solutions.

10. Enhance Energy Efficiency in existing council buildings

The ‘Re-fit Framework’ supported by the UK Government and the Local Government Association and used by some local authorities, such as City of Cardiff Council, uses an Energy Performance Contracting approach to deliver guaranteed energy efficiency improvements and energy production for their own estate. (20) There would be great benefits to expanding this scheme.

11. Switch street lighting to well-designed and well directed LED lights

Many local authorities have been investing in LED street lighting as they can expect initial resource to pay back within eight years. Solihull, for instance, plans to have replaced all its 24,000 street lights by 2024 cutting its total energy costs in half to just £612,000 and reducing its own greenhouse gas emissions by 43 per cent. Are there opportunities to speed up such a switchover for other Councils?

12. All new local authority buildings should be zero-carbon

Exeter City Council has been an early adopter of what is known as the ‘Passivhaus’ standard for zero carbon energy efficient buildings. The Passivhaus standard is basically a relatively simple approach which involves excellent thermal performance, exceptional air tightness and mechanical ventilation with heat recovery. (21) Wolverhampton City Council has built three schools to Passivhaus standard. (22) Councils should actively consider this process for building projects.

13. Enhance building standards to deliver zero-carbon homes and buildings

The UK is expecting to build around 150,000 new homes this year. Ireland also has substantial plans for new housing across the country. Yet, many of these houses will probably require retrofitting within the next 20 years to make them suitable for a net-zero country. This process needs to urgently stop and building standards should be adapted to encourage the delivery of zero carbon homes and buildings. Upgraded building standards should also specify that all buildings undergoing a major refurbishment that requires a building warrant should, at the same time, be required to install additional energy efficiency measures that will bring the building significantly closer to net-zero carbon emissions.

The decarbonisation of heating and buildings is a key next step for the UK and Ireland’s journey to net-zero (after developing a high-renewable electricity grid). By 2050, (2045 in Scotland) it is

likely that much of the vast majority of existing building stock will require retro-fitting to make them climate-friendly, with improved energy efficiency and a renewable heat source. By building new buildings that are not zero-carbon, this will inevitably add to the huge challenge and add to our retrofit task.

Local Authorities can use their powers to require higher building standards than current national standards. Ideally all new homes and commercial properties should be zero carbon or even better built to Passivhaus standard. Local authorities are unable to mandate this standard. However, thanks to the Green Building Council and the Core Cities group, the UK Government has clarified that “local authorities are not restricted in their ability to require energy efficiency standards above Building Regulations”. (23) The Irish Government should also reconsider national planning policy to encourage such higher standards at the local level.

For example, Ipswich and Cambridge councils have included a requirement for all new homes to meet a standard equivalent to the ‘Code for Sustainable Homes’ level 4. This delivers a 19% improvement on the current national standards. (24) More Councils should follow this path.

In London the Mayor’s powers are greater and the standard for new homes is zero carbon.

14. Accelerate energy efficiency retrofits scheme, using regulation and public funding to support almost all homes and buildings reach at least EPC Band C by 2030 and zero-carbon by 2045 or 2050

Councils should enforce minimum energy efficiency standards in the private rented sector – for example Newham Council in London has pioneered the use of licencing to identify rented homes and ensure full cost recovery of proper regulation and enforcement of housing standards.

Local Authorities are in a good position to be able to help energy companies target the fuel poor or vulnerable households with energy efficiency measures – the Government has produced recent guidance to allow local authorities to identify the fuel poor or vulnerable houses to energy companies. The energy companies then insulate these as part of their legal ECO obligations. (25)

Local Authorities should also look to retrofit council-owned properties - deep retrofit of all council-owned social housing, schools and other council properties to Energy Performance Certificate C or higher. This should include fitting eco-heating and developing heat networks where appropriate. This sets then a clear example of good practice to the private housing sector.

15. Local Authorities should purchase 100% renewables electricity

Council-owned energy supplier Bristol Energy has inked deals to directly take 3.55MW of power generated by two onshore wind farms in Suffolk and Aberdeenshire. The power purchase agreements (PPAs) with Thrive Renewables will provide enough electricity to power up to 3,000 Bristol households, while also helping the council edge closer to its target to achieve carbon neutrality by 2030. (26)

The deal with Thrive Renewables was completed on the e-Power online auction that enables independent renewable energy generators to sell green electricity to utilities. Simon Proctor, renewables and origination manager at Bristol Energy, said: “*This deal is an important part of our purpose to create a sustainable energy company, which has social value at its heart.*” (27)

16. Local Authorities should start (or continue) planning for zero carbon heating in their areas by their target date for net-zero carbon

By August 2019 more than half of the UK’s principal councils had declared a climate emergency, making it one of the fastest growing environmental movements in recent history. According to the Local Government Chronicle (LGC). 205 of the UK’s 408 principal authorities (county, unitary, metropolitan, London boroughs, district Councils) have declared a climate emergency, committing them to take urgent action to reduce their carbon emissions at a local level. Many have set 2030 as the target date for achieving net zero. (28) While a much slower movement in Ireland, a number of Councils are also declaring a climate emergency.

In all of the indicative scenarios set out in the UK Clean Growth Strategy, heat networks are projected to meet 17% of heat demand in homes and up to 24% of heat demand in industrial and public-sector buildings by 2050. (29) Development of heat networks needs to be progressed if this date is to be advanced to 2030.

As an excellent example of best practice, the Stirling District Heat Network is thought to be the first project of its kind in the UK using heat pump technology to harness energy from wastewater from the city's sewage works. The £6 million project is being delivered by Stirling Council in partnership with Scottish Water Horizons (SWH). SWH will own and operate the energy centre, located at the existing Stirling Waste Water Treatment Works in Forthside. SWH will sell the heat to Stirling Council at an agreed rate and volume, which the Council will then sell on to users via the heating network. Initially, the network will deliver low-carbon heat to a number of key public buildings, including the Peak Leisure Centre, Forthbank Stadium, St Modan's High School and organisations such as Zero Waste Scotland and Volunteer Scotland. There is scope for the network to also be expanded across the city to include homes, helping tackle fuel poverty and providing savings for businesses. (30)

An innovative project in Glasgow's east end is continuing to investigate the potential for untapped mine water to be harnessed as geothermal energy that could be used to help heat up to 18 million homes in the UK. The Geothermal Research Observatory will explore underground mine workings via 12 boreholes drilled to varying depths in Dalmarnock and Rutherglen's Cuningar Loop. The project has been funded by the Natural Environment Research Council (NERC) and the British Geological Survey (BGS) as part of the £31 million UK 'Geo-energy Observatories Project' and is expected to continue for 15 years.

It is estimated that a quarter of all UK homes and businesses, some 9 million buildings, sit on former coalfields. So far, scientists have drilled four boreholes with the remaining eight partially drilled exploratory channels to be completed by autumn this year. The research into Glasgow's geology, its underground water systems and the potential for heat from the water in the city's disused coal mines is expected to provide vital data that could help the UK and other countries access low-cost, low-carbon heating. Measurements will be taken from the underground observatory boreholes such as temperature, water movement and water chemistry over the period. The Coal Authority, which estimates there is enough geothermal energy in coal mines to heat 18 million homes, is preparing a map of potential mine water resources in Britain which could be utilised in the future of sustainable energy. (31)

Heat pumps are also a key technology that will deliver the majority of heat decarbonisation according to the CCC with at least 10 million heat pumps (including many hybrid heat pumps) operating in UK homes by 2035. This requires a vastly more rapid installation rate for heat pumps in the coming years and this will require a concerted, integrated effort to achieve. A structured approach to the accelerated deployment of heat pumps will ensure smooth implementation and that the economic and carbon reduction potentials are maximised through well designed programme development and delivery.

There is a perception that switching to electricity will be too expensive. Electricity costs 4 times what gas costs per kWh, so converting to electric heating could be too expensive for many consumers if it's done in the wrong way. The best way to make the transition to low carbon for space and water heating affordable is with a massive energy efficiency programme. But it is also essential to keep costs down by making the best of new technologies. Sunamp, for example, which manufactures heat batteries, reckon combining an Air Source Heat Pump using off peak electricity with their heat battery can cut the cost of heating to half the cost of gas central heating. It's not clear how all of this is going to be paid for. Even if heating with an ASHP and Heat Battery can be made relatively cheap, the cost of installing the equipment will have to be borne by somebody.

17. Identify areas suitable for renewable energy in the local plan

Local authorities could require renewable energy such as solar thermal, PV or heat pumps, beyond building regulations, to be installed on local authority and private sector developments.

As all plans have to develop detailed spatial frameworks to consider how to deliver homes for an increased population, these processes should also look at identifying suitable locations for renewable infrastructure.

18. Conclusion

This NFLA report has been much more ‘evangelical’ in its tone as it is clear Councils now have come to a greater understanding of the real urgency of the climate emergency. If Councils are truly serious in reaching such ambitious targets as their resolutions call for, then such a proactive tone and plan of action is seriously needed to make the sort of significant progress that would be required.

Without a shadow of a doubt this requires additional resource provided to local Councils from central government and the devolved administrations. It though does need Councils to think holistically and to think in a much more dynamic way than perhaps they have been used to. This report has shown a whole myriad of challenges and processes that have to be actioned across many different areas of a Council’s operation and in cooperation with core partner agencies. It is quite clearly not an easy task. Unlocking resources, such as through Council pension funds, is essential to not just fund this work, but provide the staffing and expertise to realise such ambition. Our report puts much effort into highlighting that, in an emergency, everyone must work together to deal with all parts of the problem. That is why calling ‘climate emergency’ resolutions is an apt and encouraging start to the process. Moving away from fossil fuels, and avoiding the huge costs in funding new nuclear, requires resource to be focused on renewable energy, energy efficiency, smart energy solutions and energy storage. A partnership with central government is also important as well.

There is much to be done, but it is welcome that most Councils understand now the scale of the challenge. This report encourages new zeal to take on that challenge, and in effect it is like a ‘manifesto for dynamic low carbon action’ for rapid change over the next decade. NFLA encourages all Councils to take up that challenge and move with it in a practical, effective and holistic way.

19. References

- (1) *Business Green* 2nd Sept 2019 <https://www.businessgreen.com/bg/news/3081023/clientearth-puts-councils-on-notice-over-climate-inaction> and *Client Earth* 2nd Sept 2019 <https://www.clientearth.org/press/lawyers-put-local-authorities-on-notice-over-climate-inaction/>
- (2) *Greenpeace* 2nd Sept 2019 <https://www.greenpeace.org.uk/news/lack-of-climate-investment-creating-planet-sized-debt-for-our-kids-new-chancellor-warned/> and <https://www.greenpeace.org.uk/resources/government-invest-climate-nature-emergency/>
- (3) *BBC* 29th Aug 2019 <https://www.bbc.co.uk/news/science-environment-49499521>
- (4) *Richard Black on Twitter* 29th August 2019 <https://twitter.com/richardblack/status/1166989914942181376>
- (5) *BBC Radio 4 Today Programme* 29th August 2019
- (6) *FT* 26th Aug 2019 <https://www.ft.com/content/d39a9e9a-c3f4-11e9-a8e9-296ca66511c9>
- (7) *Globe and Mail* 23rd August 2019 <https://www.theglobeandmail.com/drive/mobility/article-the-bikelash-is-real-what-the-war-between-bikes-and-cars-says-about/>
- (8) Future Learn: transforming energy systems <https://www.futurelearn.com/courses/transforming-energy-systems/1/todo/49736>
- (9) *Guardian* 21st July 2019 <https://www.theguardian.com/world/2019/jul/21/britains-first-climate-assembly-agrees-plan-for-council-to-tackle-crisis>
- (10) *Guardian* 19th July 2019 <https://www.theguardian.com/world/2019/jul/19/could-camdens-climate-assembly-help-fix-democracy-too>
- (11) How Local Authorities can fund solar, improve their finances and enable service delivery; Solar Trade Association and PV Financing Webinar 13th March 2017; Presenters: Isabella O’Dowd, Solar Trade Association and James Owen, Clean Tech Consultancy.
- (12) Friends of the Earth briefing on 33 Actions a Local Authority can take on Climate Change. <https://policy.friendsoftheearth.uk/insight/33-actions-local-authorities-can-take-climate-change>
- (13) *Guardian* 16th Aug 2019 <https://www.theguardian.com/uk-news/2019/aug/16/dundee-green-revolution-charging-hubs-electric-cabs-scotland>

- (14) House of Commons 22nd August 2019 <https://www.parliament.uk/business/committees/committees-a-z/commons-select/science-and-technology-committee/news-parliament-2017/clean-growth-report-published-17-19/>
- (15) BBC 5th July 2019 <https://www.bbc.co.uk/news/uk-48875361>
- (16) Times 29th July 2019 <https://www.thetimes.co.uk/article/electric-cars-are-a-threat-to-clean-air-claims-chris-boardman-hhqzhvxz0>
- (17) BBC 11th July 2019 <https://www.bbc.co.uk/news/business-48944561>
- (18) Times 30th Aug 2019 <https://www.thetimes.co.uk/article/6062c662-ca9f-11e9-b1f3-b9799171edee>
- (19) Guardian 25th Aug 2019 <https://www.theguardian.com/world/2019/aug/25/cargo-bikes-berlin-four-wheels-bad-transport>
- (20) See <https://www.crowncommercial.gov.uk/agreements/RM3768>
- (21) See http://passivhaustrust.org.uk/competitions_and_campaigns/passivhaus-for-local-authorities/
- (22) See: <http://www.elementalsolutions.co.uk/passivhaus-schools/>
- (23) UKGBC, 2019, Sustainability standards in new homes, policy playbook, <https://www.ukgbc.org/ukgbc-work/sustainability-standards-new-homes/>
- (24) See <https://www.ukgbc.org/wp-content/uploads/2018/09/The-Policy-Playbook-v.-June-2019-final.pdf>
- (25) BEIS, 2019, Energy Company Obligation 3, local authority eligibility guidance, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/776540/energy-company-obligation-3-LA-flexible-eligibility-guid
- (26) Business Green 24th July 2019 <https://www.businessgreen.com/bg/news/3079440/bristol-energy-inks-wind-power-deal-with-thrive-renewables>
- (27) Scotsman 23rd July 2019 <https://www.scotsman.com/business/scots-wind-farm-part-of-deal-to-power-3-000-uk-homes-1-4969301>
- (28) Local Government Chronicle 31st July 2019 <https://www.lgcplus.com/services/environment/exclusive-50-declare-climate-emergency-31-07-2019/>
- (29) Heat Networks Investment Project, BEIS 2018 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/691643/Heat_Network_Case_Study_Brochure.pdf
- (30) Video: <https://www.scottishwater.co.uk/en/About-Us/News-and-Views/070819-First-Minister-at-Stirling-Green-Heat-Project> and Stirling Council 7th Aug 2019 <https://www.stirling.gov.uk/news/2019/august-2019/stirling-s-pioneering-green-heat-network-gets-seal-of-approval-from-first-minister/>
- (31) Herald 23rd Aug 2019 <https://www.heraldscotland.com/news/17855441.glasgow-mine-workings-scheme-lead-heating-180-million-homes/>

Annexe 1: APSE Energy's 12 points to stimulate thought on taking the climate emergency agenda forward locally:

- **Leadership** – the local authority has a duty of leadership as the only democratically elected local body;
- **A strategy** to address the climate emergency and promote carbon emissions reduction;
- **Capacity** – the council requires the human and financial resources to implement the strategy;
- **Action Plan and Projects** – strategies and targets can only be achieved through projects and that all requires planning;
- **Setting a target date** for carbon neutrality and then asking officers to draw up a plan to meet that date;
- **Finance and Risk** – in times of austerity it is even more important to justify how spending decisions are made;
- **Partners** – the local authority's activities make a contribution to their locality's carbon emissions, but it may only 2 or 3% of all the emissions within the area. Other businesses, employers, academic institutions, public services and citizens make up the rest and the local authority should engage with them;
- **Suppliers** – those who supply local authorities have a duty to supply sustainably and local authorities have a duty to inform them about their sustainability requirements;
- **Education and Culture Change** - we all need to be brought up to speed with the sustainability agenda;
- **Innovation** – some of the technologies associated with reducing carbon emissions, and with renewable energy generation and energy efficiency specifically, are developing at a rapid rate. This can mean that local authorities may have to invest in technology that they have never used before;
- **Review and Inform** – the dynamic nature of this agenda means that reviewing strategies and action plans is vital.
- **Behaviour Change** – this is the most difficult to achieve and will take the longest. (26)

Annexe 2: Glasgow City Council's climate emergency working group

Now that Glasgow has been confirmed as the venue for next year's UN Climate Change Summit, with about 200 world leaders and up to 30,000 delegates there must be a myriad of new opportunities for the City to attract new funding for tackling the climate emergency.

Glasgow's Climate Emergency Working Group has made 61 recommendations which together offer a comprehensive approach for the city of Glasgow and its people to adopt and embrace towards the challenge of climate change. They call on the Council and its partners to take radical and rapid action and to do so in a renewed spirit of municipal activism. The Working Group Report is available here: <http://www.glasgow.gov.uk/councillorsandcommittees/viewDoc.asp?c=P62AFQDN0GZLZ3DNDX>

1. The Council commits to working with the business community, third sector and Glasgow's citizens and communities to achieve a carbon neutral Glasgow by 2030.
2. The Council works with partner local authorities, the city's academic institutions and other stakeholders to design, fund and commission detailed advice on the timescales, actions and budgets needed to meet or better a carbon neutral Glasgow by 2030 and that the Chief Executive provides interim reports on progress to the Environment, Sustainability and Carbon Reduction City Policy Committee.
3. Acceleration of the establishment of an energy services company takes place for the city as a necessary step towards producing more locally generated and distributed low carbon energy.
4. The Council continues to seek measures by the Scottish Government to amend non-domestic rates assessments for domestic district heating installations to encourage the use of district heating in place of standalone heating in new build and refurbished homes.
5. Subject to action on this issue by the Scottish Government, the Council consults on proposals for the inclusion of district heating systems where feasible in major new housing developments and renewal or refurbishment projects.
6. New ambitious targets are established to address the low energy efficiency and high-carbon heating that are a feature of the city's older housing stock, most of which is in private or mixed-tenure ownership.
7. The Council supports the creation of a Scottish Grid factor, to more accurately measure the carbon intensity of local energy consumption.
8. There is a Property and Land Strategy to consolidate Council building stock, which can ensure that buildings which are retained are retrofitted to the highest possible standards and building management systems are in place, and those disposed of are done so responsibly.
9. The Council takes forward a programme of investment in its assets designed to help deliver carbon neutrality for the city by 2030.
10. The Chief Executive reviews current staffing resource distribution within the Council and brings forward proposals to increase the Council's focus on the climate emergency.
11. A review is undertaken to address existing barriers to tree planting in order to significantly increase the number of trees within the city over the next 5 years.
12. A formal audit and costed plan is brought forward by the Council and its city-region partners on the opportunities for much greater tree planting and other ways of harnessing the natural environment to absorb emissions.
13. A review takes place to identify vacant and derelict land suitable for greening and rewilding, with a view to its change of use as designated open space.
14. The city works to end single use plastic waste and it commits to developing Scotland's first plastic free shopping zone.
15. A review of current communications with households around food waste bins and the use of recycling bins takes place, with a view to increasing usage of food waste bins.
16. The Council supports the long-term investment as proposed by the Connectivity Commission that is required to build the Glasgow Metro, and to create new local connections to the suburban areas.
17. The Council investigates use of the 'franchising' powers set out in the Transport Bill to regulate the city's bus network and to work on the principles of one network, one timetable, one ticket.
18. The Council works with neighbouring local authorities and the Scottish Government to clarify the governance of the city region's transport network.

19. The Council works with partner local authorities to consider the opportunity presented by First Glasgow being up for sale and for the business case to be explored, including the financial viability of re-municipalisation.
20. The Council engages with interested local authorities and other stakeholders to initiate a formal assessment of the potential for making the transition to a public transport system that is free to use.
21. A feasibility study is developed into integrated ticketing and more physically and digitally accessible travel.
22. A review of HGV movements within the city is undertaken with the aim of limiting their number. This should look at potential models for freight consolidation services within the City Centre in order to provide a service to businesses and reduce the numbers of vans and HGVs throughout the city centre.
23. An updated Electric Vehicle strategy, with reference to the recent announcement of Scottish Power's ambitions to support the city, is produced by the end of 2019.
24. The reduction of illegal parking and engine idling is targeted through increased enforcement and public awareness and that the Council should alert members to the resources necessary to ensure this.
25. As part of the development of the Low Emission Zone's Phase 2, clear guidance for all vehicles is available within the agreed timescale.
26. A process and timescale is established for consulting on a potentially expanded geographical area for the LEZ.
27. The city's new transport strategy develops our proposals and those of the Connectivity Commission to deliver a more active Glasgow.
28. The Council works to deliver an increase in education and awareness amongst relevant staff and third-parties of design standards such as Transport Scotland's 'Cycling by Design' guidance and records its commitment to have regard to these standards in future changes to the road network.
29. Transport Scotland's sustainable transport hierarchy is enforced, including, where necessary, that space currently dominated by the private car is reprioritised to provide a fairer transport system.
30. The development of the new local and regional transport strategies should include ambitious targets for modal shift with associated delivery plans.
31. The Council takes forward the success of the pedestrianisation of parts of the city centre by accelerating the Avenues Projects and by further improving the public realm to encourage active travel choices.
32. The Council ensures that relevant stakeholders such as GoBike and Sustrans are notified of, and consulted on developments key to, or which may have an impact on, Glasgow's developing cycling network.
33. The Council makes a commitment to the Glasgow Connectivity Commission's call for the completion of a network of safe, high-quality, segregated cycling arterial routes connecting the city centre to suburbs and peripheral neighbourhoods.
34. The Council delivers more 20mph speed limits on residential roads.
35. The early roll out of 'car-free' zones to other schools and locations attended by large numbers of potentially vulnerable pedestrians takes place, building on lessons emerging from the current pilot.
36. The Council and its partners publish a sustainable food strategy for the city within the next year and that the Council considers making space for food growing a requirement of new housing developments.
37. The Council and partners revise the city's economic strategy to put addressing the climate emergency front and centre of planning for Glasgow's future economy.
38. The Council and partners develop a local version of the Scottish Government's Just Transition Commission and plan actively for the shift to a carbon neutral economy.
39. The development of a Circular Economy Route Map for the city takes place and support is given for the Circular Economy Bill in this term of the Scottish Parliament.
40. A sustainable city story should be central to accounts of our history and where we see our future going.
41. We work with other cities and wider networks to share knowledge, collaborate and use our combined voice to create climate resilient strategies, including plans for development of Historic Glasgow and transformation of the River Clyde waterfront.

42. Glasgow's schools should formally engage with pupils on the climate emergency and the actions which can be taken to tackle it.
43. The Council develops a more sustainable approach to school meals and pilots the changes needed to move towards plastic-free school catering.
44. Our schools work closely with local colleges and universities to build the skills and capacity for a greener economy, including a focus on new technologies (such as heat pumps, battery storage, and other forms of low carbon technology), and ensuring the provision of apprenticeships and other opportunities.
45. Investment in the school estate and its uses has carbon reduction and climate education as core principles.
46. All decisions made by the Health and Social Care Partnership are assessed on the basis of their climate and carbon impacts and integrated with equality and human rights assessments to maximise their positive effects and to reduce any negative impacts.
47. The city engages in climate conversations with residents through its Community Planning structures and considers how to roll-out the Weathering Change model in the context of its review of Thriving Places.
48. The Council and third sector use their recently developed concordat as a vehicle for taking forward a dialogue on climate and appropriate action, as well as grant funding decisions.
49. The Council and partners work with community and faith groups to ensure that the voices of new Glaswegians are heard as part of a wider community climate conversation.
50. All decisions made by the Council and its partners in response to the climate emergency are supported by equality and human rights assessments, as well as the Fairer Scotland duty, to maximise their positive effects and to reduce any negative impacts.
51. The new City Development Plan presents a vision for a low carbon city that can guide the development of proposals and planning decisions that help our city respond to the climate challenge.
52. Partners need to revisit the Community Plan and ensure that climate change informs all of it.
53. Community Planning partners work together to ensure that all senior officers in the city's agencies have undertaken carbon literacy training and become climate leaders themselves, with further plans brought forward to leaven these issues throughout the thinking of all sectors.
54. The Council reports back to the people of Glasgow annually on what it has done to address the climate emergency and what it is planning to do.
55. The Council acts in an exemplar role by introducing formal climate screening of all its budgets, with the 2020/21 budget being used to pilot budget setting with a clear description of climate impacts.
56. A climate risk register is developed by the Council and its partners, accommodating the Climate Ready Clyde findings.
57. The city's partners work together to develop business cases for low carbon energy and transport investments through examination of alternative financing models including the use of municipal climate bonds.
58. The Council works with local authority partners and the Scottish Government to consider whether any legislative change is needed to allow local authorities to embed carbon reduction in procurement processes. In the light of the outcome of this exercise, we further recommend that the Council reviews its procurement strategy in response to the climate emergency.
59. The Council's business support and planning services are made available to support community investment in renewable energy, including the Glasgow Community Energy Co-operative.
60. The Council works with the other employers and members [of Strathclyde Pension Fund] to make a wholesale shift away from investment in hydrocarbons and that the fund trustees ask for a report at the earliest opportunity on these risks.
61. The Council acts as an exemplar organisation for the city and develops a programme of carbon reduction measures for its own estate and activities in response to the target set in this report.

Annexe 3: Edinburgh's City Centre Transformation Strategy

<https://indd.adobe.com/view/8da3a6e5-94d7-436f-81ed-1b8b90049ed1>

This Edinburgh City Centre Transformation (CCT) Strategy prioritises movement on foot, by bike and by public transport in central streets while improving access and opportunity for all.

Across the whole of the city centre, changes over the next ten years, will deliver:

- A walkable city centre right at the heart of the World Heritage Site, enabled by a pedestrian priority zone and a network of connected, high-quality, car-free streets;
- High-quality streets and public spaces where improvements allow for people to be inspired by the city's unique heritage while they interact, relax or play;
- A connected network across the city centre of new segregated and safe cycle routes to link communities and destinations, including the provision of a new walking and cycling bridge connecting the Old Town and the New Town;
- Enhanced bus priority measures through the city centre, with improved traffic signal priority and rationalisation of bus stops to reduce bus congestion on key streets;
- A free city centre hopper bus to support people moving around a city without a car, linking city centre communities;
- The creation of public transport interchanges at key nodes of the city centre, to improve connectivity between rail, bus, tram and the new hopper service;
- An accessible city centre where people, especially those with mobility restrictions, can overcome the city's steep hills and explore its different street levels through lifts or other forms of vertical connections at key points in the city;
- A reallocation of space in the city centre to reduce the impact of vehicles and free up space for other users, through a significant reduction of on-street parking with priority given to residents and blue badge parking where appropriate.

These changes will make a direct contribution to addressing the challenges of climate change and poor air quality.

Annexe 4: Some recent 'Local Energy' case studies encouraging best practice in the area of low carbon policy action

1. Warrington to produce all its own renewable electricity

Together Energy –the Clydebank-based energy company - has sold a 50% stake in the business to Warrington Borough Council for £18m. Together Energy will become a 100% renewable energy supplier. The Company's ability to continue as a going concern depended on it obtaining additional funding, even though it is thought to be firmly on the road to profitability.

Warrington has built a reputation as one of the UK's greenest councils, and has held a stated policy aim of setting up its own energy company for several years. Its investment comes amid plans by the Scottish Government to establish a public, not-for-profit energy company by the end of the current parliament in 2021. Warrington invested £59m in two solar farm projects in Yorkshire, in Hull and York, in 2018 in a bid to cut its own energy costs. It is understood that the solar farms, currently under development, will in the long term supply the electricity for Together Energy's customers, with the council also intending to sell energy to the open market to generate revenue. Between them the two solar farms are expected to generate 60MW (megawatts) of renewable electricity.

In a cabinet meeting agenda paper, available on the council's website, the authority sets out a range of benefits to its acquisition of a 50% stake in the Scottish firm. It notes the investment in Together will help it to supply 100% green energy to council residents, and to relieve fuel poverty in Warrington, which affects around 10,000 in the Cheshire town. The council states in the paper: "*Together Energy have a strong social focus and have programmes and training schemes to get the long-term unemployed or those with limited qualifications back into the workplace. This policy will be implemented in Warrington helping to get the unemployed and low skilled back into employment.*"

Together Energy described the team at Warrington Borough Council as both visionary and ambitious in its approach to sustainable energy and helping to future proof community services through its carefully planned investments. (1)

Warrington Borough Council is expected to become the first local authority to produce all its own electricity from green energy, following a landmark funding deal that will see them own two solar farms. The deal with Investec Bank and Leapfrog Finance will see the council build solar farms at two sites - a 34.7MWp hybrid solar farm in York and a 25.7MWp solar farm in Hull - which will generate 'millions of pounds' in profits every year for 30 years.

The two solar farms will involve a number of 'firsts' for the UK solar industry as the 27MW lithium-ion battery storage system at York will be the largest at any UK solar farm. (2)

The Council has also installed over 3,000 solar panels - covering an area almost as large as a Premier League Football pitch - at the Plastic Omnium building in west Warrington - a factory which manufactures plastic components for the car industry. This will generate a financial return for the authority and follows the enormous success of the installation of solar PV panels on social housing in Warrington. Warrington Borough Council will own, operate and maintain the panels, effectively renting the roof space of the building. The panels will provide Plastic Omnium with discounted electricity, with all profits made by the council through the deal ploughed back into delivering vital council services. (3)

Warrington also teamed up with and Newham and Thurrock Councils to purchase bonds in the Swindon Solar Park. The– agreed with owners Rockfire Capital - makes Warrington, Newham and Thurrock among the first councils in the UK to invest in 'clean tech' bonds. The deal is expected to deliver £500,000 in returns every year for Warrington Council, which can be ploughed back into council services. (4)

Warrington Borough Council has also invested £5.25 million to provide solar photovoltaics to 1,500 properties and three sheltered housing schemes. The project, in partnership with the Golden Gates Housing trust means that tenants will annually save around £233 on their energy bills. (5)

- (1) Herald 11th Sept 2019 https://www.heraldscotland.com/business_hq/17893613.scots-energy-firm-sells-50-per-cent-stake-english-council-18m/
- (2) Environment Journal 28th Feb 2019 <https://environmentjournal.online/articles/warrington-council-hope-to-generate-millions-in-profit-from-solar-farms/>

- (3) Warrington Borough Council 13th June 2019 <https://www.warrington.gov.uk/news/article/2817/council-installs-solar-panels-to-reduce-carbon-emissions>
- (4) Wire FM 16th Sept 2019 <https://www.wirefm.com/news/local/warrington-council-invests-in-solar-farm/>
- (5) Green Match 1st July 2014 <https://www.greenmatch.co.uk/blog/2014/07/1-500-uk-homes-will-benefit-from-solar-panels-funded-by-council> Daily Mirror 22nd Oct 2015 <https://www.mirror.co.uk/news/uk-news/solar-power-drags-families-out-6686719>

2. West Suffolk Council-owned Solar smashes generation records

A solar farm owned by West Suffolk Council has smashed generation targets in its third year of operation, taking its overall income to £4 million. The 12.4MW solar farm at Toggam Farm in Lakenheath generated 12,631MWh of electricity in the past year, surpassing its target of 11,591MWh. This saw West Suffolk Council receive an income of £1.5 million from the farm, £100,000 more than expected. The income – its highest from the farm – came from a combination of selling electricity to the grid and income from Renewable Obligation Certificates.

Solar Power Portal 15th August 2019

https://www.solarpowerportal.co.uk/news/council_owned_solar_farm_surpasses_generation_targets_records_highest_income

3. Northumberland County Council solar farm is announced

Northumberland County Council has announced plans to install a high-tech solar farm at the back of its County Hall in Morpeth. The scheme will also see 60 new electric vehicle (EV) charging points installed in the structure of the solar farm, which will be suspended above the hall's car parking spaces. The £2.3m scheme will be half-funded via a European Regional Development Fund (ERDF) grant, while the council will cover the other 50%. The cost of the scheme is eventually expected to be covered by the savings it will generate for the council's energy costs.

Environment Journal 8th August 2019

<https://environmentjournal.online/articles/northumberland-county-hq-set-to-be-powered-by-solar-farm/>

4. Top Solar Councils Awarded

Portsmouth City Council has scooped a top award at a national awards ceremony for its commitment to solar power. It came following work by the city authority to assist neighbours West Sussex County Council in delivering a major solar panel scheme. The huge initiative, known as the Solar Power for Schools Programme, saw dozens of schools across Sussex being fitted with the cash-saving devices.

Portsmouth News 8th August 2019

<https://www.portsmouth.co.uk/news/politics/portsmouth-city-council-scoops-top-award-for-schools-solar-panel-scheme-1-9027472>

5. Wokingham goes Solar

Wokingham Borough Council has become the latest to embrace solar, pledging school installs during the next academic year. Solar is to be installed on schools, libraries, leisure centres and other council-owned buildings, supporting Wokingham Borough Council's goal of being carbon neutral by 2030. The announcement comes after it recently joined the ranks of councils – as well as central government – in declaring a climate emergency.

Solar Power Portal 7th August 2019

https://www.solarpowerportal.co.uk/news/wokingham_gears_up_for_school_solar_installs_to_help_meet_carbon_neutral_20

6. Cornwall Local Energy market trial

Centrica is leading the way in delivering new technologies and approaches that will transform the role of the energy supplier and how we all use and interact with energy. The Cornwall Local Energy Market trial offers a glimpse into the future of a truly decentralised energy landscape with thousands, if not millions, of homes and businesses playing their part in regional energy markets. This is the first project in the world which explores how decentralised flexible assets can work together in an efficient local

energy system that meets the needs of generators, customers and networks alike – responding to price signals from the market in order to reduce the strain on the grid at peak times and maximise the productivity of low carbon generation assets. As part of the trial Centrica is installing solar panels and battery storage units in 100 homes across the county, and making that stored energy available to the market as a single source of flexibility – the largest ‘virtual power plant’ of its kind in the UK.

Business Green 2nd August 2019

<https://www.businessgreen.com/bg/sponsored/3079926/energy-independence-key-to-thriving-communities>

7. Hydrogen-fuelled ferries considered for Western Isles

An innovative plan to use hydrogen produced at island wind farms to power the ferry network has been announced by Point and Sandwick Trust. Yesterday, the trust published a feasibility study to assess the suitability of using hydrogen produced from local wind farms to power future ferry services operating in the Western Isles. The project looked at the practical and economic feasibility of using new island wind farms to produce zero-carbon “green” hydrogen fuel for future types of clean emission ferries operating on the established Caledonian MacBrayne routes.

Press and Journal 30th July 2019

<https://www.pressandjournal.co.uk/fp/news/islands/western-isles/1808108/hydrogen-fuelled-ferries-considered-for-western-isles/>

8. Stroud calls a Climate Emergency

In December 2018, Stroud District Council pledged to do everything in its power to make the district carbon neutral by 2030, a leading pledge that was followed by Gloucestershire County Council unanimously committing in May of this year to become carbon neutral within its estate by 2030 and across the county by 2050. One of the key components needed to achieve this neutrality target will be to move from the current energy mix that is 90% reliant on fossil fuels, to one that is reliant instead on renewable energy capacity (alongside energy efficiency and energy demand reduction). In light of this, Stroud council commissioned CSE, partnered with Land Use Consultants, to research local renewable energy capacity. This project builds upon our experience and understanding of the current context for renewable energy and planning policy in Gloucestershire; we recently produced the Gloucestershire Sustainable Energy Strategy (2018) and hosted the first county-wide Climate Change conference that was designed to support authorities moving forward on carbon neutral targets.

Centre for Sustainable Energy 8th July 2019

<https://www.cse.org.uk/news/view/2372>

9. Rural District Heating Schemes could add real benefit

Danish-style district heating projects could cut fuel poverty in rural communities, according to a joint paper by gas firm Calor, think tank Common Weal and the Energy Poverty Research Initiative. The cost of rural district heating is not substantially higher than urban district heating schemes. This is because, while the distances are greater, the necessary pipework is easier to install because access is easier. However, this solution may only work for 60% of properties and those that cannot be connected could use biogas boilers in conjunction with building-mounted solar generators, the research found. The conclusion is based on research carried out with Glasgow Caledonian University and comes decades after Denmark took steps to create its large-scale networks, which collect “waste” heat from factories and transport systems and redistribute this. They also take in energy from conventional power stations and renewables. More than 90% of rural residents who are income poor are also fuel poor, according to research. This is far higher than in towns and cities and the problem is linked to poor physical and mental health and lower education attainment. Some campaigners summarise the situation for struggling households as a “heat or eat” choice.

The National 24th June 2019

<https://www.thenational.scot/news/17725040.danish-style-district-heating-projects-could-ease-fuel-poverty/>

10. Lincolnshire County Council develops a new energy source from its grass verges

Grass cuttings from verges that have been allowed to grow into wildflower meadows will be cut at the end of summer and sold to the National Grid to create energy in the first scheme of its kind. Lincolnshire County Council is letting its grass verges grow wild over summer in order to encourage pollinators such as butterflies and bees instead of mowing them. At the end of the summer, the grass will be shorn and the long cuttings sent to be used as biofuel. The money made from the scheme will be put back into maintaining the verges for next year. While verges are often ignored, they provide important habitats for wildlife and also have potential to be used for peat-free compost and green fuel. Mark, the project manager at Lincolnshire Wildlife Trust says “It’s just as if our biggest nature reserve has been hidden in plain sight.

Telegraph 15th June 2019

<https://www.telegraph.co.uk/news/2019/06/15/grass-cuttings-roadside-verges-sold-national-grid-raise-money/>

11. Balancing Renewables

Smart Charging: parked EV batteries can save billions in grid balancing. 95% of a car’s time is spent parked. It’s why parked and plugged-in EVs could be the battery banks of the future, stabilising grids powered by wind and solar. More than 1bn EVs could be on the world’s road by 2050, their 14 TWh of EV batteries dwarfing the projected 9 TWh of stationary batteries, according to the IRENA report “Innovation Outlook: smart charging for electric vehicles”. Smart charging could therefore save billions of dollars in grid investments. Distribution system operator Stromnetz Hamburg is testing a smart charging system which, when fully implemented, could reduce grid investments by 90%. But there are specific challenges, including: slow charging (rather than fast) is better suited to grid balancing; “car sharing” reduces an EV’s grid availability; charging infrastructure at home and at the workplace is critical.

Energy Post 6th June 2019

<https://energypost.eu/smart-charging-parked-ev-batteries-can-save-billions-in-grid-balancing/>

12. Manchester & Bristol back deeper decarbonisation plans

Two of the UK’s largest cities have this week moved to strengthen their decarbonisation plans, as the city councils of Manchester and Bristol both voted to bring forward their target dates for securing ‘carbon neutral; or ‘zero carbon’ status. On Tuesday, Bristol City Council unanimously backed a motion put forward by Green party councillor Carla Denyer to make the city ‘carbon neutral’ by 2030 – a full 20 years earlier than the previous target. The move came as Manchester City Council’s Executive formally adopted a new target to become a ‘zero carbon city’ by 2038, 12 years earlier than the target it replaces.

Denyer hailed the vote as “a fantastic day for Bristol”, adding that it provided further evidence cities and sub-national governments can lead the response to the escalating climate risks highlighted by the recent IPCC report. Manchester City Council’s Executive backed a plan developed by the Council’s Climate Change Board with input from the University of Manchester’s Tyndall Centre. The plan, dubbed Playing Our Full Part, would introduce a science-based ‘carbon budget’ for the city that caps total emissions at 15 million tonnes from 2018-2100. To meet the target the city will be required to cut emissions 13 per cent year-on-year from 2018 onwards, making it a net zero carbon city by 2038. The Manchester Climate Change Board will now develop a draft action plan by March 2019, ahead of producing a final plan by 2020, detailing how the city can stay within its carbon budget.

Business Green 16th November 2018

<https://www.businessgreen.com/bg/news/3066475/bristol-and-manchester-unveil-fresh-plans-to-tackle-climate-emergency>

Annexe 5: NFLA Reports on Decentralised Energy and Local Action

The NFLA's first comprehensive overview of how Councils in England, Scotland and Wales are moving rapidly forward in developing decentralised energy policies was published in October 2016. This is available here:

<http://www.nuclearpolicy.info/wp/wp-content/uploads/2016/11/A265- NB152 -Decentralised-energy-best-practice.pdf>

The NFLA's second update on the continuing progress of decentralised energy nationally and internationally was published in May 2017. It reviews innovative policy within this area which can help local government move forward with developing such projects. It shows the important and essential role local government can play in the development of low carbon energy. This is available here:

<http://www.nuclearpolicy.info/wp/wp-content/uploads/2017/05/A273 NB160 Decentralised energy update.pdf>

The NFLA's third annual assessment of the 'state of play' amongst Local Authorities in the development of local, or decentralised, energy projects, strategies and policies was published in May 2018. The report again provided a large number of best practice examples. This is available here:

<http://www.nuclearpolicy.info/wp/wp-content/uploads/2018/05/A288 NB175 Decentralised energy.pdf>

The Association for Public Service Excellence (APSE) Energy provide support and promote best practice in the development of renewable and decentralised energy in the UK. The NFLA reported in November 2018 on APSE's 2018 Energy Summit to update member authorities on the 'state of play' in decentralised energy so that they can keep apprised of new and interesting policy developments. This is available here:

<http://www.nuclearpolicy.info/wp/wp-content/uploads/2018/11/A294 NB182 Keeping up with energy.pdf>

In May 2019, NFLA also published a Policy Briefing to provide Councils with practical ways to develop strategies that support climate change mitigation and low carbon renewable energy at a time when local government is going through one of the most financially challenging periods in its entire history. This Policy Briefing is structured in two parts. The first considers in some detail some of the practical solutions that Councils from across the UK and Ireland are developing to inspire and fund low carbon strategies and policies. The second part gives a thorough analysis of some specific examples of best practice across local government. It provides some tangible evidence of the hard work that is going on, along with targeted finance, to develop specific energy generation, energy efficiency and energy storage projects. This is available here:

<http://www.nuclearpolicy.info/wp/wp-content/uploads/2019/05/A300 NB187 Climate emergency renewables.pdf>

This was followed up a compendium Policy Briefing which specifically consider the different challenge facing Councils and central government in the Republic of Ireland. This noted that, despite the great potential for renewable energy on the island of Ireland, they were lagging behind in work to reduce carbon emissions in comparison with the EU norm. The Policy Briefing encouraged concerted new action and to much more actively bring local government into this low carbon programme, with new powers, resources, targets and low carbon strategies for Councils to deliver. The report profiled some promising work in the Greater Dublin area and encouraged the work of the likes of the Tipperary Energy Agency as an example of best practice to promote and deliver across the island of Ireland. This report is available here:

<http://www.nuclearpolicy.info/wp/wp-content/uploads/2019/08/A302 NB189 Ireland and climate change.pdf>