

NFLA Policy Briefing No.199



Date: 4th May 2020

Subject: Tackling the climate emergency in the UK and Ireland – how Councils can own their commitments and demonstrate their low carbon ambition

1. Introduction

This report has been developed by the NFLA Steering Committee Policy Advisor in conjunction with the NFLA Secretary, and in discussion with colleagues involved in the implementation of policies to tackle the 'climate emergency'. NFLA has developed a suite of documents over the past few years in the ways Local Authorities should respond to the critical issues around climate change and the need to deliver low and eventually zero-carbon policies.

2019 saw an unprecedented number of local authorities declare a climate emergency. By the end of April 2019 at least 92 local authorities in the UK and Ireland had declared a 'climate emergency'. Less than a year later, by February 2020, the number was up to over 280, including 65% of District, County, Unitary & Metropolitan Councils and 8 Combined Authorities/City Regions. (1) In the Republic of Ireland 18 local authorities had made a declaration. (2)

Over the past year the NFLA has been particularly active in producing a series of briefings to assist Councils in tackling the 'climate emergency' and advocating best practice for effective local authority low carbon action.

These included:

- NFLA Policy Briefing No.187, 'Climate Emergency' Declarations and the practicalities in Local Authority Action to go 'Carbon Neutral' https://www.nuclearpolicy.info/wp/wp-content/uploads/2019/05/A300_NB187_Climate_emergency_renewables.pdf
- NFLA Policy Briefing No.189, Ireland and Climate Change – isn't it time for a local response? https://www.nuclearpolicy.info/wp/wp-content/uploads/2019/08/A302_NB189_Ireland_and_climate_change.pdf
- NFLA Policy Briefing No.191, Climate emergency – the next steps: a NFLA 'manifesto' for dynamic low carbon action https://www.nuclearpolicy.info/wp/wp-content/uploads/2019/09/A304_NB191_Climate_Emergency_the_next_steps.pdf
- NFLA Policy Briefing No.194, The 'top 10' actions for local authorities to tackle the climate emergency – a short guide. https://www.nuclearpolicy.info/wp/wp-content/uploads/2019/12/A307_NB194_Climate_emergency_10_top_tasks.pdf

2. Ten essential local authority actions to tackle the climate emergency

NFLA Policy Briefing 194 advocated ten essential and urgent actions which local authorities could take to tackle the climate emergency. These were:

1. Buy only 100% renewable electricity for council use and seek to install renewables on council buildings and council land (and in cooperation with other agencies);
2. Develop wider and innovative renewable energy schemes like solar farms, low carbon district heating and heat pump schemes as part of efforts to offset its carbon footprint;

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3. Carry out a program of energy efficiency improvements on council properties (including with social housing providers and community energy cooperatives) and enforce building standards to deliver zero-carbon homes and buildings;
4. Stop buying fossil fuelled vehicles immediately;
5. Start replacing current vehicle inventory with EVs and hydrogen powered vehicles;
6. Begin a program of installing EV charging points;
7. Draw up a plan for tree planting in parks, along roadside etc;
8. Switch to locally grown sources for food in schools and council run institutions. Implement plans to introduce more allotments;
9. Prioritise pedestrians and cycling strategies over road building schemes whilst encouraging low carbon transport use;
10. Draw up a detailed climate emergency plan in consultation with citizens' assemblies and large institutions such as health services, universities, sports facilities, large companies, transport operators, etc.

Many local authorities have set a target to achieve net zero carbon by as early as 2030. This is ambitious, but necessary because of the threat posed by climate change. The investment needed to meet this target will be significant. But targets need actions and actions need funding. Many authorities will already have a funding gap. In such a context, finding money to turn climate targets into budget proposals is not easy. On the other hand, get it right, and schools can be spending on jotters not fuel bills - more walking and cycling means healthier people and less congestion. Protection and enhancement of natural spaces means better wellbeing. The current lockdown created by Covid-19 has created much economic uncertainty and both local and national governments will have immense challenges to deal with after it is eased, but it has proved beneficial to the environment, and led to calls for more radical change to develop a 'green stimulus' for tackling the long-term climate crisis. NFLA are looking at these matters in a separate report that will be issued in parallel with this Policy Briefing.

3. Reciprocal action from central government

Clearly if the National or Devolved Governments across the UK and Ireland want to meet their own climate change targets they are going to need local government to play its part. Indeed, it could be argued one of the core weaknesses of the UK Climate Change Act 2008 was, though it sets legally binding targets for central government, it does not take this down to a local level. The same is true for the Republic of Ireland, where there is still a reluctance from the Irish Government to grant councils the powers or resources it needs to be a more effective supporting partner. With or without its own local targets, all Councils are going to need to allocate new funds to play a more prominent role in tackling the national climate emergency. This is complicated even further by the financial burden brought on Councils by the Covid-19 lockdown.

NFLA welcomes the recent initiative of APSE Energy to establish a Climate Change Commission to provide a list of core requirements of councils from central government. Similarly, the NFLA is aware that the current discussions over which political parties will make up the next Irish Government is concentrating on how Ireland tackles the climate emergency, and what the role of central and local government should be in the future in undertaking this huge challenge.

In some areas local authorities do have a range of powers it could use, for example, to force the construction industry to build more energy efficient building, or to force companies to reduce carbon emissions, but they are often reticent to make full use of them over concerns of legal action from companies who do not want to implement them due to increased costs. A considerable level of increased encouragement from central government would really help, including tightening up legislation in such areas.

At the recent APSE Energy Summit, Patrick Allcorn, Head of Local Energy at the UK Government commented that many local Councils or Combined Authorities are asking for new powers in this area individually. He argues Councils need to work in a much more joined up way to do this collectively through regional combined authority groups and bodies like the LGA, COSLA, NILGA, WLGA. The same can be said in the Republic of Ireland through local government and local councillor bodies. NFLA will be submitting this report to the UK, Irish and the devolved governments in Scotland, Wales and Northern Ireland on behalf of our member authorities.

As part of this Councils need to consider explaining more cogently to central government what processes they are using to decarbonise local energy, heating and transport and providing an evidence base of what additional resource is required for it to be achieved. Definitions on what could be a 'clean growth' principle are required from central government as well to encourage a standardisation of response from local government, which at the moment is not consistent.

The exhaustive list of excellent examples in Annex 1 of this report shows the breadth of action that is ongoing in local government across the UK and Ireland, but it is going on often in a policy vacuum, and there remains real concern over lack of adequately qualified staff and resource to fulfil lofty ambition.

At the same APSE Energy Summit, Michael Lenaghan of Zero Waste Scotland, added that decarbonisation should be allied with the need to reduce the material footprint through a more circular economy. The current linear model of 'take, make, consume and dispose' is heavily inefficient. A focus on decarbonisation needs to be allied with dematerialisation in looking at ways to use less materials to achieve the same service use. This can be done through the likes of recycling, reuse, repair and manufacturing and looking at both longer-life products and improved asset use through sharing and leasing schemes.

Such a circular economy requires renewed effort, policy focus and financial leverage that has been evident in activity with decarbonisation. The role of Councils in this transition can include:

- Following the evidence: measure, target and act. Understand the impact of our actions.
- Focus on function – identify essential outcomes and develop alternatives to them.
- Ownership should have a purpose – it needs to rest with the party who can maintain it.
- Encourage a culture of innovation.
- If barriers are found, discuss them with colleagues to find a solution.

Central and devolved governments should also be seeking to create low carbon energy partnerships with government, rather than supporting projects in a haphazard way. The multitude of climate emergency resolutions shows there is political will for change in local government, but there needs to be a greater level of devolution to the local level of powers and resource, or the actions that come out of this are inconsistent. Some Councils which have developed a solid policy process for moving forward may move quickly, but others will fall behind and a result low carbon across the board does not take place at the speed required across the UK and Ireland.

4. Finding the finance

The projects, plans and actions by local authorities across the UK and Ireland set out below show a range of different funding sources. In Warrington, Nottingham, West Suffolk solar projects are actually beginning to generate a new income for the Councils, helping them to meet their climate targets as well as making a profit. Bristol's City Leap aims to attract investment of up to £1bn throughout the City. Other projects have been relying on EU Regional Development Funding, for example Cheshire West and Chester Council are using ERDF funds to install solar panels and batteries in council housing, thus reducing fuel poverty and helping to keep tenants hard earned cash in the area. Irish local authorities should pursue similar schemes by taking advantage of the ERDF scheme. The future of this funding source is now, for Councils in the UK, obviously uncertain.

Other projects have used Salix funding (which provides interest-free Government funding to the public sector to improve energy efficiency, reduce carbon emissions and lower energy bills), such as Oxford City Council's solar carport. The Sustainable Energy Authority of Ireland also provides financial support for Irish Councils in developing low carbon energy zones, but much more support is required from the SEAI to move plans further forward.

In some local authorities, including Bristol, Brighton, Edinburgh and Newport, the council is working with community energy co-operatives which means the renewable energy projects are funded by a public share offer. In Tipperary, its innovative Energy Agency, working closely with the County Council, uses a social enterprise model to attract funds.

The City of London plans to meet its renewable energy targets by putting out a notice of procurement for a Power Purchase Agreement. South Somerset is generating an income by selling grid balancing services after having invested in an energy storage battery. Annex 1 gives further detail on some of these examples.

5. Some new ideas from the LGA and Ashden / Friends of the Earth

A recent briefing by Arup for the Local Government Association (LGA) in England and Wales, called “You’ve declared a Climate Emergency... what next? Guidance for local authorities”, comes at the problem from a different angle. (3) It suggests nine key steps to effective climate action, planning and implementation.

1. **Own:** Find a senior owner to co-ordinate climate action across different departments and functions (perhaps a councillor with the support of a senior officer);
2. **Understand:** Assess the key contributing causes and local impacts of climate change to inform focus areas;
3. **Plan:** Agree targets, set milestones, identify what needs to be done, by when, to meet the target;
4. **Collaborate:** You can’t do this alone! Engagement with a wide variety of organisations, individuals, businesses and government will be necessary;
5. **Prioritise:** What action can you take that will have the biggest impact? What has to be done to adapt to unavoidable risks? What existing actions can be modified to help achieve your aims?
6. **Budget:** Cost your actions and prepare your business case;
7. **Invest:** Secure investment and procure partners;
8. **Implement:** Set out a detailed implementation programme and stick to it;
9. **Monitor:** Don’t skip this step! Obtain good quality data on results and performance, use and share this learning to drive continued progress.

The LGA has looked at what 100 councils are doing on climate change, covering 182 different projects in order to collate best practise across councils and establish which projects could deliver carbon impact whilst also being affordable and deliverable. Councils clearly recognise that effectively addressing climate change requires a ‘whole council approach’ which embeds climate change across all of a council’s work areas. The councils who are doing this are producing strategic plans, baselining current positions, developing consultation approaches with partners, business and the public. They also have identified a political lead for climate change so that the issue has political direction and drive.

Councils who have spent such resources on developing their corporate approach to the climate emergency have been able to deliver clear progress. The data also suggests that councils are ambitious and driving policies, strategies and projects to do more in the next decade and this will most likely require significant resources.

The environmental charity Ashden has recently worked with Friends of the Earth to put together a list of the most effective actions councils can take on climate change. These 31 actions are quantified in terms of likely carbon savings, approximate cost and co-benefits. The co-benefits for each action can be better health, improved economy, increased equity and resilience. Ashden has recognised that councils vary in size across the country and so have done some modelling to make their figures applicable to councils of varying population sizes. (4) The LGA sets out the top 5 projects which generate the greatest carbon savings as identified by the Ashden model. This indicates that projects which identify and invest in renewable energy sources are the ones which generate the greatest carbon savings. This is followed by projects focussing on transport issues such as encouraging a rapid shift to electric vehicles by offering EV charging points and projects looking at consolidation centres. Finally, using a council’s supply chain to minimise emissions through greener procurement also delivers one of the top 5 carbon savings. (5)

According to the UK Committee on Climate Change, local authorities (across the UK as well as in Ireland) have significant scope to influence emissions in buildings, surface transport, and waste, which together account for 40% of UK greenhouse gas emissions. (6)

6. Conclusions

For NFLA, the last 12 months have seen a step change in local government across the UK and Ireland in their understanding of the climate crisis and the need to formally respond in tackling what most are now calling the 'climate emergency'. The current experience in dealing with the Covid-19 public health crisis has exacerbated some of the problems for government at all levels, but also shown that government can respond to a crisis. Whilst the international climate change COP 26 meeting in Glasgow has now had to be moved to 2021, it is clear one way governments can lead their populations out of the current public health crisis is to focus available resource on dealing with the climate crisis, which could be more intense in the future if action is not undertaken now.

This briefing has provided focus on some of the key issues and new ideas that are around in local and central government to tackle this. NFLA's parallel briefing on how to respond to the covid-19 crisis with a green stimulus will also seek to look at ways and ideas to move the resource and action plans in the right direction. The extensive annex that follows below also provides all councils with some excellent best practice ideas across the areas of low carbon energy, heating and transport and NFLA recommends a full consideration of them. No one size will fit all, as councils have different issues, whether rural or urban, but there are enough examples out there for local government across the UK and Ireland to adopt in their own area.

It is also clear local government in England, Scotland, Wales, Northern Ireland and the Republic of Ireland needs to work more closely together to understand the best practice out there, and come forward with solutions to their own government. Local authorities clearly need both additional resource and powers if they are going to move forward in this area, but they also need to have a full policy framework underpinning low carbon action, and specified carbon budgets to provide sensible and realisable targets. NFLA will continue to seek out the best ideas and solutions coming out of local government and specialist research institutes to inform our members of the direction of travel. Our parallel report on responding to the after-effects of Covid-19 should also be considered for transferring the lessons learned from dealing with this profound public health crisis into the equally troubling medium-term climate emergency. Annex 1 below shows local government is up to the task in supporting the national response to the climate crisis, but without resource, further powers and practical support then the immensity of the challenge will not be fully realised, to the detriment of all of us.

7. References

- (1) Climate Emergency UK, list of UK Councils who have passed a climate emergency, March 2019 <https://www.climateemergency.uk/blog/list-of-councils/>
- (2) Climate Emergency Declaration.org, list of national and local declaration made around the world, March 2019 <https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/>
- (3) Arup guide for the LGA, Climate Emergency – what next? December 2019 <https://www.local.gov.uk/sites/default/files/documents/ARUP-Climate-Emergency-What-Next.pdf>
- (4) Ashden and Friends of the Earth, 31 Climate Actions for Councils, November 2019 <https://www.ashden.org/programmes/top-31-climate-actions-for-councils>
- (5) LGA Climate Emergency Update 18th December 2019 <https://lga.moderngov.co.uk/documents/s23907/Climate%20Emergency%20Update.pdf>
- (6) Committee on Climate Change Report May 2012 <https://www.theccc.org.uk/publication/how-local-authorities-can-reduce-emissions-and-manage-climate-risks/>

Current examples of local authority best practice in tackling the climate emergency

This section, which has been developed by NFLA over the past few years, seeks to outline a wide range of recent examples where Local Authorities have developed a range of low carbon energy generation, heating or transport solutions as part of their climate emergency action plans. The list is in alphabetical order. NFLA have tried to provide a wide range of innovative examples to assist council officers and councillors who are putting together their own local climate emergency plan. The list is therefore a snapshot of some of the best examples the NFLA Secretariat has found in the past few months.

1. Aberdeenshire Social Housing goes Solar

Aberdeenshire Council is planning to install solar PV and battery storage for 500 local authority homes. The properties in Inverurie and MacDuff will receive solar and storage systems with the intention of alleviating grid constraints in the area. Around 3.25kW of solar will be paired with a 5.5kWh battery in each property, and the systems will be used to provide grid services to the local network. The pilot scheme has been launched after the council attempted to roll-out energy efficient schemes on existing properties, including solar PV, but was hamstrung by local grid constraints which prevented connecting systems to the grid.

Solar Power Portal 31st Oct 2019

https://www.solarpowerportal.co.uk/news/emtec_energy_clinches_4m_aberdeenshire_solar_plus_storage_retrofit_tender

2. Barnsley – Virtual Power Plant

Energise Barnsley – a council-owned social enterprise - and social housing firm Berneslai Homes have been working with Northern Powergrid and battery company Moixa on a 'ground breaking' energy storage and solar project in Barnsley. The project highlights the potential for home batteries to drive grid decarbonisation, save residents money and deliver a boost in renewable power use. Led by Northern Powergrid, the two-year study saw 40 smart home batteries installed alongside 27 solar rooftop systems across a cluster of social homes in the village of Oxspring, South Yorkshire, all of which were connected up to form a 'virtual power plant' designed to flexibly manage electricity use. The results of the trial found that batteries combined with roof-top solar reduced the need for power from the grid network during the more expensive and carbon-intensive evening peak by 25 per cent, when energy was instead drawn from rooftop solar energy stored during the day. As such the systems both boosted the amount of local renewable power households could use at peak times and helped to ease pressure on the grid by reducing the impact of domestic solar generation on the network by 20 per cent.

Business Green 4th March 2020 <https://www.businessgreen.com/news/4011768/barnsley-virtual-power-plant-battery-trial-delivers-green-grid-boost>

3. Draft Belfast Resilient Strategy launched

In January, Belfast City Council published its draft resilient strategy for local comment (the closing date for responses has been extended to June 2020). The strategy proposes that we transition to an inclusive, low-carbon, climate resilient economy in a generation. This goal aims to ensure we deliver the Belfast Agenda priorities and are ready for the challenges ahead.

The strategy identifies three keys areas of focus:

- Climate resilience
- Connectivity
- Children and young people.

Belfast is a member of a global network of cities like Barcelona, Cape Town, San Francisco and Christchurch, all working to reduce vulnerabilities and build our capacity to adapt to shocks and stresses. In terms of climate change the draft strategy concludes: “A step change is now required across a range of city partners to develop a comprehensive climate adaptation and mitigation plan, which will include science based targets and aim to achieve an inclusive approach to decarbonisation.” (1)

The plan is an acknowledgement that Northern Ireland Councils needs to move much faster forward in delivering low-carbon activity, and local events have emphasised strong public support for doing so. As

a welcome start to some of these new plans, Belfast City Council has introduced 12 new electric vehicles which will be used in parks across the city. It is part of the council's plans to review its vehicle fleet, with long-term ambitions set for transition to low carbon transport options in the future. (2)

- (1) Draft Belfast Resilient Strategy, January 2020 https://yoursay.belfastcity.gov.uk/chief-executives/rmclbelfast-resilience-strategy/supporting_documents/Final%20Version%20Uploaded%20and%20for%20Release.pdf
- (2) Smart Belfast, January 2020 <https://smartbelfast.city/story/belfast-unveils-new-electric-vehicles-for-city-parks/>

4. Bournemouth – exceeding emissions reduction targets

In 2015, Bournemouth Borough Council – one of only 5 UK cities on CDP's list of leading global cities on climate action - set an ambition of reducing area-wide emissions by 30% by 2020. The town exceeded this aim in 2017, prompting it to set a new 2020 target of a 42% reduction. This updated aim is due to be exceeded by the end of the year.

The Council has developed two area plans for climate mitigation and adaptation – one short-term and one long-term. Both strategies contain action plans across seven areas which the local authority believes are most likely to be affected by climate risk, namely: surface water and flood management; tourism; public health; council services; sustainable food; green infrastructure and built infrastructure. The council is carrying out investigations into adaptation and mitigation for its transport sector this year. Its current transport strategy, developed in conjunction with Dorset Council, includes measures to electrify bus services and the council's fleet; incentivise cycling and electric car journeys to businesses and schools and, crucially, minimise the need for any town-centre travel not made by foot altogether.

Eddie 20th Feb 2020 <https://www.edie.net/news/9/Which-UK-cities-are-climate--A-Listers----and-why-/>

5. Bristol – First to Declare a Climate Emergency

In November 2018, Bristol City Council was the first local authority to officially declare a climate emergency. That motion was unanimously passed and now acts as the foundations for the City's transformative commitment to become carbon-neutral by 2030.

The Council has already recorded a 71% reduction in carbon emissions from its direct activities against a 2005 baseline – surpassing a target to reduce emissions by 65% by 2020 – it now has the lowest carbon footprint of any UK city.

The Council's goal is to be carbon-neutral for its own direct emissions by 2025. To reach this aim it recently partnered with Manchester-based blockchain technology company EnergiMine to reward council employees who partake in sustainable actions by using the EnergiToken (ETK) platform. ETK uses blockchain to incentivise actions that promote energy reduction, clean transport use and social cause initiatives. Employees can now earn tokens to spend on rewards – or donate the equivalent value to a registered charity – by acting in an environmentally sustainable way.

Great progress has also been made outside of the Council's own operations – particularly in the area of renewable energy. More than £50m has been invested in low-carbon and renewable energy projects in the region since 2012: Bristol sourced 21GWh of energy generation from solar, wind and biomass in 2018 – enough to power 24,000 homes for a month.

Under the Council's 'One City One Climate Strategy', the Council wants to maximise the opportunity of a smarter, more connected energy system which harnesses low-carbon technologies, works with local communities and embraces innovation. It plans to do this through City Leap: a project co-led with local energy supplier Bristol Energy. Through City Leap, the Council aims to attract a further £1bn of global investment in the city. Local partners already supporting the project include the University of Bristol, University of the West of England, Western Power Distribution, Bristol is Open, Invest Bristol and Bath, Bristol Green Capital Partnership and Bristol Energy.

Programmes supported by the council include a 5MW community-owned solar project, including roof-mounted solar panels on public buildings, and Bristol's Heat Network – a new network of underground

pipes delivering affordable, low-carbon heat which is already benefitting more than 1,000 social housing properties and is continuing to expand. (1)

In February 2020 Bristol City Council published a new study led by the Centre for Sustainable Energy (CSE) exploring key aspects of how the city could achieve its declared ambition to be carbon neutral by 2030. The detailed study focused on cutting to near zero by 2030 the carbon emissions associated with the city's use of fossil fuels (like gas, petrol and diesel), the electricity it consumes and the waste it produces. CSE partnered with Ricardo (on transport) and Eunomia (on waste) to undertake the analysis. (2)

- (1) Edie 25th Nov 2019 <https://www.edie.net/library/Net-zero-cities--Bristol-s-mission-to-be-carbon-neutral-by-2030/6950>
- (2) Centre for Sustainable Energy 26th Feb 2020 <https://www.cse.org.uk/news/view/2435>

6. Cambridgeshire Solar Car Ports

A 2.5MW solar carport with battery storage is being developed by Cambridgeshire County Council which will include electric vehicle (EV) chargers. It will be located at a Park and Ride with electricity generated used to provide the energy for all onsite needs, including the EV chargers as well as CCTV, although the majority of it will be sold to a third party. The revenue from that sale will be used to support the continued delivery of frontline services. Cambridgeshire County Council has already completed several energy projects, including a 12MW solar array at Triangle Farm, as well as having developed a school's energy programme. In January 2019, it unveiled plans for two solar-plus-storage projects on existing landfill sites, with the aim of the sites being used for demand-side response services and to offer balancing capacity to the national grid. In 2017, it announced it had received planning permission for a 948kW solar carport at another Park & Ride.

Solar Power Portal 9th April 2020

<https://www.solarpowerportal.co.uk/news/cambridgeshire-county-council-to-build-2.5mw-solar-carport>

7. Cardiff's Solar Landfill

Cardiff Council is constructing a 9MW solar farm on its landfill site. The project received planning approval in May 2019, after concerns over the impact on local bird populations were allayed. The project represents an investment of around £15m using land that cannot be practically used for development or farming. More than half of the output from the site will be used by Welsh Water, to power its nearby waste water works, with the balance sold to the National Grid.

Greener Wales 18th June 2019 <https://greener.wales/2019/06/18/story/>

8. Carmarthenshire Climate Emergency One Year On.

Carmarthenshire Council wants to install wind turbines and solar farms on council-owned land as part of a new plan to become net carbon zero by 2030. Executive board members have approved a plan to become carbon neutral in four areas initially - non-domestic buildings, like leisure centres and schools; fleet mileage, such as refuse lorries; business mileage - car journeys taken by employees; and street lighting.

Targets will be developed as part of an annual review of the action plan, and other initiatives are likely to be added in due course. The move follows a meeting last February in which councillors declared a climate emergency, committed the authority to becoming carbon neutral by 2030, and required an action plan within 12 months.

Council officers estimate it would still take 59 wind turbines as big as the one at Nantycaws household waste recycling centre, or just under 250,000 solar panels, to offset the current carbon emissions from non-domestic buildings, street lighting, and fleet and business mileage.

Wales Online 6th Feb 2020 <https://www.walesonline.co.uk/news/wales-news/carmarthenshire-council-emergency-climate-change-17693953>

9. Cheshire West & Chester Council Solar Plans

Cheshire West & Chester Council has announced plans to install solar panels with battery storage technology across two large estates. 180 council-owned homes will have solar panels with a total capacity of 250kW installed. The £500,000 project is part of the Low Carbon Housing Support Programme and has been jointly funded by the European Regional Development Fund (ERDF). (1)

Meanwhile, Chester Community Energy Ltd which launched its first share offer in 2016 raising £62,000 to fund a 50kw solar PV system on the Northgate Arena leisure centre, has launched a second share offer to raise a further £122,000 to install solar panels on two more leisure centres at Neston and Christleton and to install LED lighting in community buildings. (2)

(1) Energy Live News 12th Nov 2019 <https://www.energylivenews.com/2019/11/12/cheshire-west-chester-council-toinstall-solar-plus-storage/>

(2) See <http://www.chestercommunityenergy.org.uk/invest-in-us/>

10. City of London Authority seeks PPA

The City of London Corporation has put out a notice of procurement for up to 55GWh of renewable energy per year. It is seeking this through an offsite Power Purchase Agreement (PPA) with renewable energy project owners and operators. It will agree a fixed price for the duration of the contract with the owners that will be indexed annually using the Consumer Price Index, taking into account the benefits of the renewables. The projects are expected to have a value of £30,375,000 excluding VAT. The City of London is looking for a project, or portfolio of projects, in Great Britain that is not fully operational before the PPA is signed. The PPAs will have a term of 15 years, with an estimated annual contract value of £2,025,000.

Solar Power Portal 9th Jan 2020

https://www.solarpowerportal.co.uk/news/city_of_london_tendering_for_55gwh_of_renewables_annually

11. Cornwall's Smart Grid

Construction has started on Cornwall's first smart grid-connected wind turbine, which will power the equivalent of around 1,100 homes and help cut carbon emissions. The 2.3MW turbine will be sited on Cornwall Council land. The new wind turbine is part of an EU-funded trial and forms part of the innovative Cornwall Local Energy Market (LEM) which aims to help increase the amount of renewable energy that can be deployed by managing the electricity network more efficiently.

Launched in December 2016, the LEM project is receiving £11.5m support from the European Regional Development Fund (ERDF) and is a collaboration between Centrica, Western Power Distribution (WPD), N-SIDE, Imperial College, the University of Exeter and National Grid. The project brings Cornish homes and businesses together via a fully automated online flexible energy market platform. The platform allows network operators to improve the way the grid works by buying energy flexibility from local homes and businesses, helping to balance both grid demand and capacity. The LEM is now in its live trials phase, which are set to continue until March.

The LEM is also about to install one of Cornwall's largest battery storage units on premises owned by Wave Hub Limited in Hayle. The 1MW battery will provide energy resilience to the Wave Hub site and the local grid. Wave Hub Limited, which is solely owned by Cornwall Council, will own the battery storage system once in place, with Centrica responsible for the funding, construction and operation. Wave Hub Limited exists to help wave energy technologies and offshore wind developers from around the world test in open sea conditions and provides some of the best conditions in Europe.

Cornwall Council has a track record in championing clean energy through the nationally renowned Green Cornwall Programme which has delivered energy efficiency improvements in over 3,000 homes, the UK's first collective energy saving in excess of £500,000 for Cornish residents and England's first community energy revolving loan fund. It is a key investor in two, pioneering geothermal heat and power projects at the Eden Project and at United Downs near Redruth and it was also the first local authority to develop its own solar farm.

This is the West Country 23rd Jan 2020

https://www.thisisthewestcountry.co.uk/news/cornwall_news/18182185.cornwalls-first-smart-grid-connected-wind-turbine/

12. Coventry – Low Carbon Transport Hub

Another CDP A-lister, Coventry City Council was one of the first cities to produce a Climate Change Strategy which aimed to reduce carbon dioxide emissions, across the City, by 27.5% by the year 2020. It achieved this by 2014 - six years early. The City has made major investments in low-carbon heat networks, energy-efficient street lighting, electric buses and very light rail. Coventry is also home to the London Electric Vehicle Company (LEVC) – the UK's only manufacturer of fully electric taxis –and is recognised across the UK and beyond as a hub for low-carbon transport. The city-region will soon play host to a new clean transport lab, which will spearhead research into electric vehicles, biomethane and hydrogen for transport, after a £30m investment was jointly made by German engineering giant FEV and Coventry University.

Edie 20th Feb 2020 <https://www.edie.net/news/9/Which-UK-cities-are-climate--A-Listers----and-why/>

13. Delivering low carbon reductions in the Greater Dublin area

As noted in NFLA Policy Briefing 189, the four Greater Dublin Local Authorities (Dublin City Council, Fingal County Council, South Dublin County Council and Dun Laoghaire-Rathdown Council) have produced Climate Action Plans in conjunction with the Dublin Energy Agency, Codema for 2019-2024. All four plans are fairly similar. Codema was set up as a not-for-profit limited company by Dublin City Council in 1997 under the SAVE II Programme of the European Union. It was one of 14 local energy agencies set up around Ireland to help local authorities meet their energy performance targets through professional development and implementation of good and best practice.

<https://www.codema.ie/about-us>

The important point to note is that the four Climate Plans only cover a five year period to 2024. A Dublin Region Energy Master Plan is being developed over the next two years with support from SEAI's Research, Development and Demonstration (RD&D) programme. This will create evidence-based, realistic, and costed pathways for the Dublin Region to achieve its carbon emission reduction targets to 2030 and 2050. To move more dramatically forward, all Irish Councils needs new powers and further resource from the new Irish Government. The Climate Plans and the Region Energy Master Plan will greatly assist in prioritising and identifying core priorities over the decade.

The updated Fingal County Council Low Action Plan notes four key actions at the heart of the plan:

- A 33% improvement in the Council's energy efficiency by 2020 (which has been achieved)
- A 40% reduction in the Council's greenhouse gas emissions by 2030
- To make Dublin a climate resilient region, by reducing the impacts of future climate change-related events
- To actively engage and inform citizens on climate change

Fingal County Council Climate Change Action Plan, November 2019

https://www.fingal.ie/sites/default/files/2019-08/20190812_fcc_climate_change_action_plan_final_0.pdf

14. Edinburgh's Net Zero Commitment

Edinburgh City Council (ECC) has pledged to ensure that the city operates on a "net-zero" carbon basis by 2030 - 15 years before Scotland's national net-zero target for 2045. The new commitment forms part of the local authority's updated Corporate Policy and Strategy Committee's report on climate, which calls on all actors across the city to follow suit. It additionally states that, in the event that this deadline is missed, 2037 would be set as an "absolute limit" for delivering a local zero-carbon economy.

ECC has proposed a low-emission zone and a re-design of the city centre which focuses on pedestrians, cyclists and public transport rather than private vehicles. (1)

A pioneering micro-hydro 'Archimedes Screw' has been installed in the City's in Saughton Park which is capable of generating 39KW of electricity along with a ground-source heat pump. The micro-hydro scheme project was partially financed by SP Energy Networks Green Economy Fund. (2)

Meanwhile, Edinburgh is set to be home to one million trees by the end of the decade. Council leaders want Scotland's capital to follow in the footsteps of New York, Shanghai and Los Angeles by becoming a "Million Tree City". (3)

Edinburgh Community Solar Co-operative is planning to launch its second share offer in April 2020. The Co-operative intends to issue share to fund the installation of solar panels on around a further 11 council buildings including the Ratho Climbing Centre, a roads depot and a recycling centre. (4)

- (1) Edie 20th May 2019 <https://www.edie.net/news/6/Edinburgh-unveils-plans-to-become--net-zero-carbon-city-by-2030/>
- (2) Edinburgh Reporter 1st Oct 2019 <https://www.theedinburghreporter.co.uk/2019/10/saughton-park-micro-hydro-scheme-has-bespoke-archimedes-screw-installed/>
- (3) Herald 24th Jan 2020 <https://www.heraldscotland.com/news/18183415.edinburgh-take-leaf-new-yorks-blue-trees-plan/>
- (4) See Solar Co-op February 2020 newsletter <https://www.edinburghsolar.coop/wp-content/uploads/2020/02/ECSC-Newsletter-7-Feb-2020.pdf>

15. Exeter Energiesprong

A ground-breaking project to retrofit energy measures in existing properties to create net-zero energy homes is being piloted in Exeter. The on-going pilot will deliver a retrofit solution known as 'Energiesprong' to six existing council properties. Energiesprong's whole house refurbishment performance standard upgrades properties to the very highest energy standards. Included in the system is a ground source heat pump heating system, insulated wall and roof panels, and photovoltaic roof panels with battery storage facility. The aim of the project is to create net-zero energy homes that are warm and comfortable for tenants to live in, and deliver reduced energy bills. (1)

Exeter City Futures, an independent community interest company working with the council has submitted a "Plan for a Net Zero Exeter" to the city council. The plan details how the city can transform its transport, energy consumption habits and deliver healthy homes for residents while promoting green space and local produce as part of a just transition to net-zero. The organisation notes that businesses in the city could reduce emissions by 34,000 tonnes annually by implementing carbon reduction measures. Up to 53,000 tonnes of carbon could be saved if Exeter generated all its electricity from renewables, while 140,000 tonnes of carbon could be avoided if Exeter were to exploit the maximum potential for renewable generation. According to Exeter City Futures, the plan will be refreshed at the end of the year to account for impact caused by the coronavirus. (2)

"This plan represents the contribution of hundreds of businesses and individuals across Exeter, who have engaged with us to set out the action plan to become a carbon-neutral city and ensure it remains one of the best places to live in the UK," said Liz O'Driscoll, managing director of Exeter City Futures. (3)

- (1) PBC Today 17th Feb 2020 <https://www.pbctoday.co.uk/news/energy-news/net-zero-energy-homes-exeter/71865/>
- (2) Edie 7th April 2020 <https://www.edie.net/news/6/Net-zero-by-2030--Decarbonisation-plans-presented-to-Exeter-City-Council/>
- (3) Business Green 8th April 2020 <https://www.businessgreen.com/news/4013709/exeter-roadmap-net-zero-submitted-city-council>

16. Glasgow, Gateshead and Bridgend moving forward with Geothermal Heat Projects

An innovative project in Glasgow's east end is investigating the potential for untapped mine water to be harnessed as geothermal energy that could be used to help heat up to 180 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 Geoenergy Observatories Project and is expected to continue for 15 years.

It is estimated that a quarter of all UK homes and businesses, some 9m 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 180m homes, is preparing a map of potential mine water resources in Britain which could be utilised in the future of sustainable energy. (1)

Gateshead has by far the UK's biggest commercial minewater heating scheme. It supplies all the needs of Lanchester Wines' warehouse, keeping millions of bottles of wine temperate, and also heats a neighbouring distribution depot. Advocates of using minewater for heating regard it as having particularly significant potential. A quarter of all UK homes and businesses, some 9m buildings, and most of its largest cities outside London sit on former coalfields.

At present, minewater is a problem. Often high in iron and pollutants and potentially a threat to drinking water and rivers, its management by the publicly funded Coal Authority cost £18m last year. Now three extraction shafts outside the wine warehouse raise 39 litres of minewater a second to the surface using an open loop water source heat pump system. The minewater travels by pipe around the plant room into a heat exchanger. Here, the minewater heat boils liquid ammonia, concentrating the ammonia's heat at 50 degrees C. This heat is then used to warm water which circulates around the factory's heating system. Meanwhile the minewater, above ground for only two minutes, is sent back underground to warm up again.

The 60-year-old Gateshead warehouse has a 2.4MW system yielding 6KW of heat for each kilowatt of electricity used. Its installation has brought the company its first payment, of £117,000 payment, under the government's renewable heat incentive scheme. The company's other nearby warehouse, which has hit an even better minewater supply yielding 67 litres a second, will within weeks start operating its own heating scheme. Payback on the £3.5m investment, part of £8m spent on renewable energy to make the company carbon neutral, within seven years.

In Bridgend, in south Wales, the local authority is working with scientists to develop a minewater heating network for a local community. And in Durham the county council has invited tenders for heating a leisure centre swimming pool using minewater. (2)

(1) Herald 23rd Aug 2019 <https://www.heraldscotland.com/news/17855441.glasgow-mine-workings-schemelead-heating-180-million-homes/>

(2) FT 18th Aug 2019 <https://www.ft.com/content/4587032c-a4a6-11e9-a282-2df48f366f7d>

17. Glasgow's Net Zero Roadmap

Glasgow has unveiled its first detailed roadmap setting out how to reach its Net Zero targets. Based on forecasts commissioned by Scottish Power from Capital Economics, the report outlines what needs to be done to become the UK's first Net Zero city.

The study forecasts the city will need to install more than 175,000 electric vehicle (EV) charging points by 2030 to reach Net Zero, including nearly 17,000 chargers in non-residential areas – the total cost of these installations is expected to reach around £298 million.

It also estimates Glasgow will require around £1.4 billion of funding to equip more than 244,000 homes with electric heat pumps in order to decarbonise their heat supply, and the city's energy network will need £648 million of investment to support these changes but notes these could potentially be reduced by up to 40% by investing "in a planned and strategic way". (1)

Glasgow is also planning Scotland's first carbon-neutral urban district. Under a scheme being explored by academics and civic leaders, the needs of city dwellers — including power, heat and transport — will be fuelled by green energy. A feasibility study led by Strathclyde University is due to be launched later this year. The district will benefit from heat pumps, smart energy grids that deliver 100% renewable energy to residents and businesses, and smart streets that give priority to pedestrians, are easily accessible and encourage active travel. (2)

- (1) Energy Live News 7th Feb 2020 <https://www.energylivenews.com/2020/02/07/glasgow-announces-net-zero-roadmap-to-decarbonise-the-city/>
- (2) Times 12th April 2020 <https://www.thetimes.co.uk/edition/scotland/first-carbon-neutral-scots-urban-district-planned-for-glasgow-r95gkx3qm>

18. Leeds Big Climate Conversation

Leeds City Council's ambition is to become a net zero carbon city by 2030. In April 2019 it launched a Climate Conversation and committed to develop an action plan for Leeds by the end of the year. The work is informed by the Leeds Climate Change Commission, formed three years ago in conjunction with the University of Leeds, which has world leading academics in the field of climate science. The council has received nearly 8000 responses to the consultation, which involved an online questionnaire and over 80 events.

In tandem with the consultation, a citizens' jury was established by the Leeds Climate Change Commission to bring forward recommendations. The jury, comprised of 25 people drawn from backgrounds and perspectives which were representative of the public of Leeds as a whole, came forward with 12 recommendations, ranked by priority. The citizens' jury demonstrated that once people have exposure to the facts on climate change, the vast majority support action.

The council has already acquired the largest local government electric vehicle fleet in the UK, committed to halve the energy required for street lighting using LEDs and to replace gas in the city centre with district heating. Further recommendations to the Executive Board include:

- An energy efficiency programme which reduces emissions from council buildings by a further 40% by 2025;
- Purchase 100% of electricity from green sources, supporting new renewable capacity;
- Purchase only low emission vehicles by 2025;
- Remove payment for the use of staff petrol and diesel cars by 2025. (1)

The Council has been working with the top 10 carbon contributors in the city, most of which are public sector organisations like the hospitals and the university and there are conversations taking place about how the council can support them to reduce their carbon footprints. (2)

- (1) Leeds City Council, Climate Emergency Update 7th January 2020 <https://democracy.leeds.gov.uk/documents/s198403/Climate%20Emergency%20Cover%20Report%20191219.pdf>
- (2) Edie 16th March 2020 <https://www.edie.net/library/Net-zero-cities--Leeds-s-mission-to-be-carbon-neutral-by-2030/6968>

19. Sustainable Leicester

In February 2019, CDP A-Lister, Leicester City Council declared a climate emergency. The declaration built on the local authority's existing sustainability action plan. The plan highlights Leicester's overarching goal of halving emissions by 2025, against a 1990 baseline.

Since the plan was launched, Leicester City Council has invested heavily in streamlining and electrifying its vehicle fleet, improving energy efficiency across its estate and cutting emissions from heating council homes. More recent good news announcements include switching to electric buses at the Birstall Park and Ride; investing £340,000 to improve energy efficiency for 269 vulnerable homes; launching a bike hire scheme, expanding the 'eco-schools' programme to 100 locations and extending grants for SMEs looking to improve energy efficiency. (1)

The current plan has a big emphasis on improving the energy efficiency of social and private housing. Grants of up to £80,000 have been provided to landlords for making energy improvements to their tenanted properties heating systems. District heating was identified as a key way of achieving long term carbon reduction targets. The current scheme is mainly run on gas-fired CHP (combined heat and power) which is more efficient than conventional methods of heat and electricity generation through a reduction in the amount of wasted heat. The plan was the increase the capacity of the district heating scheme but also to add renewable energy into the system. (2)

- (1) Edie 20th Feb 2020 <https://www.edie.net/news/9/Which-UK-cities-are-climate--A-Listers----and-why/>
- (2) Leicester City Council Sustainability Action Plan 2016-19
<https://www.leicester.gov.uk/media/181523/sustainability-action-plan-2016-2019.pdf>

20. Manchester City Council spells out its 5-year Low Carbon Action Plan

Manchester City Council has approved a new action plan that would commit to halving the council's carbon footprint by 2025, as a step towards the city's wider ambition to reach net-zero emissions by 2038. The five-year Climate Change Action Plan sets out the measures the Council will introduce to reduce carbon emissions from its buildings, energy use and transport by 50% by 2025.

The plan was given final approval at the Council's Executive on the 11th March. According to the Plan, 1,800 tonnes of carbon can be cut by retrofitting as many of the 350 buildings in its estate as possible. A further 3,000 tonnes can be reduced through the second phase of this action plan. A large-scale clean energy generation scheme that includes onsite solar and wind generation on council land, buildings and sites will save an estimated 7,000 tonnes, while a shared underground heating system connected to the Town Hall and other buildings will deliver annual carbon savings of 1,600 tonnes. The Council will also plan to convert half of its refuse collection vehicles that are reaching end-of-life with 27 new electric vehicles (EVs). It is estimated this will cost £9.95m and will save 900 tonnes of carbon annually. Increasing the number of EVs and reducing staff travel will deliver a combined reduction in carbon emissions of 500 tonnes. Finally, the continued replacement of city street lighting with LED replacements, which is in its final stage, will save more than 220 tonnes annually. Manchester City Council will also implement measures to remove carbon from the atmosphere by supporting the Manchester Tree Action Plan, which is set out to plant 1,000 new trees, 1,000 new hedge trees and four community orchards a year.

Edie 3rd March 2020 <https://www.edie.net/news/9/Manchester-City-Council-spells-out-five-year-action-plan-to-halve-emissions/>

21. Greater Manchester – a bastion of climate action

Another of CDP's A-listers, Greater Manchester is establishing itself as a bastion of climate action. It scores highly in the rankings for having set a 2038 carbon neutral target, which includes annual emissions cuts of 15%, with the city working to add at least 45MW of locally generated renewable electricity to the grid by 2024. (1)

The Greater Manchester Combined Authority is one of the first places in the UK to set a science-based target, setting the foundations to achieve carbon neutrality by 2038, 12 years ahead of the UK Government goal. As a target that demands average annual emission reductions of 15%, it is no mean feat. Targets cannot be delivered without a clear plan of action. The pivotal starting point is understanding the city-region's contribution to UK emissions – 3.6%. This figure has been in steady decline, with a 39% reduction from 1990 to 2015, and Greater Manchester is accelerating its ambition to meet its target.

NO₂ levels in parts of the city-region are in breach of legal limits, the main source of which is vehicles so a single Clean Air Plan will cut down emissions and safeguard the health of citizens, now and in the future. The Metrolink tram network has undergone significant expansion and investment, with annual passenger journeys seeing a four-fold increase over the past 5 years alone. This will be bolstered by completion of the £350m extension of the network to Trafford Park in 2020. On cycling and walking, £500m has already been allocated to over 80 cycling and walking schemes as part of the city-region's Bee Network.

On energy, Greater Manchester also aspires to be increasingly powered by locally generated renewable electricity, adding at least an extra 45MW to the grid by 2024. In partnership with Electricity North West (ENWL), the city-region is working to assess how future energy demand can be met with local renewable sources. Citizens are also set to have a greater amount of low-carbon options available to them, with the city-region seeking to reduce heat demand from existing homes with retrofit measures needing to be installed at least 60,000 homes each year by 2040. (2)

All new buildings across the city-region must be net-zero emissions on an operational basis by 2028. This requirement was complemented by a ban on new fracking projects, ahead of the UK. (3)

- (1) Business Green 18th Feb 2020 <https://www.businessgreen.com/news/4010922/cdp-british-cities-ranked-world-best-climate-action-transparency>
- (2) CDP (accessed) 18th Feb 2020 <https://www.cdp.net/en/articles/cities/greater-manchester>
- (3) Edie 19th Feb 2020 <https://www.edie.net/news/9/Which-UK-cities-are-climate--A-Listers---and-why/>

22. Midlothian Council's District Heating Network

Midlothian Council has chosen Swedish energy giant Vattenfall as its partner to deliver low carbon heating in a 50:50 joint venture, which will initially see the installation of a district heating network for new homes at the Shawfair development. The heat feeding the network will be sourced from waste heat produced by FCC's Millerhill waste and recycling plant.

Up to £7.3 million of funding will be provided by the Scottish Government's Low Carbon Infrastructure Transformation Project, which is part funded by the European Regional Development Fund. The partnership will also explore the potential of thermal storage and other local heat sources to enable the network to grow and expand across Midlothian and beyond.

Energy Live News 12th Feb 2020 <https://www.energylivenews.com/2020/02/12/midlothian-council-partners-with-vattenfall-for-district-heating-network/>

23. Newport's Ambitious Solar Plan

Newport Council is working with community organisation, Egni Co-op, to help the authority become a carbon-neutral by 2030. Following a detailed feasibility study - with support from the Welsh Government Energy Service, Sustainable Communities Wales and the Wales Co-operative Centre - a plan has been drawn up to install 6,000 solar panels across 21 sites at no cost to the council – up to 2MW. Schools, a council depot and care homes have been identified so far, with the majority of the electricity generated to be used on site. Some, however, will be exported back to the grid.

Egni Co-op, which funds and manages PV installations in Wales, was set up by Awel Aman Tawe (AAT), a community energy charity which has been operating for 20 years. The solar panels in Newport have been funded by a loan from the Development Bank of Wales and Egni's ongoing co-op share offer, which has raised £1.4m to date.

Business Live 23rd Feb 2020

<https://www.business-live.co.uk/economic-development/ambitious-plans-solar-panel-revolution-17799143>

Solar Power Portal 21st Feb 2020

<https://www.solarpowerportal.co.uk/news/newport-city-council-unveils-plans-for-up-to-2mw-of-rooftop-solar-across-21>

See also Egni Co-op Share Offer: <https://egni.coop/> and <https://egni.coop/partnership-to-help-boost-newport-councils-ambition-to-be-carbon-neutral/>

24. Northumberland Solar Car Port

Plans for an 800kW solar carport with battery storage have received final approval from Northumberland County Council. The carport is to be installed at County Hall headquarters. A 400kW battery and 60 electric vehicle charge points are also to be installed on the site, with the aim of having the carport up and running by the summer of 2021. Solar is set to provide around 50% of the site's electricity consumption when combined with pre-existing rooftop solar. Northumberland County Council has applied for a grant through the European Regional Development Fund which would fund half of the £2.3 million project. The other half will be paid for by the council.

It has

(1) Solar Power Portal 31st July 2019

<https://www.solarpowerportal.co.uk/news/northumberland-council-800kw-solar-carport-install-to-get-go-ahead>

Northumberland 7th Aug 2019 <https://www.northumberland.gov.uk/News/2019/Aug/Solar-farm-plan-for-county-HQ.aspx>

25. Newry and Mourne holds climate change conference to understand further action

The move to develop low carbon policies is increasing across the whole island of Ireland, but it has proven more difficult to grow as Councils in Northern Ireland and the Republic of Ireland do not have as many of the powers as their compatriots across the Irish Sea.

With support from the NFLA Secretariat, Newry, Mourne and Down Council hosted a detailed conference on the challenge of climate change in early March. Keynote speakers included Jan Gustav Strandenaes, Senior Advisor to the UN on Sustainable Development Policy and Professor John Barry of Queen's University. The conference also included case studies from a number of best practice examples across the UK and Ireland. The learning points from this and other events are being brought into internal thinking as the Council seeks to develop dynamic low-carbon action plans. (1)

APSE Energy also held an early March conference for Northern Ireland Councils on how they should seek to tackle the climate emergency. (2) Speakers at this meeting included a consideration of Belfast City Council's low carbon resilience strategy, Sustainable NI looking at the drivers for climate action and Shave McGivern from Newry, Mourne and Down Council looking at the importance of its cross-border CANN (Climate Action for the Natura Network) project with Louth County Council for bringing biodiversity plans into low carbon strategies. (3)

- (1) Northern Ireland Environment Link, 12th March 2020
<https://www.nienvironmentlink.org/cmsfiles/NMD-E-invite-Climate-Change-Our-Challenge-Conference.pdf>
- (2) APSE Energy Northern Ireland, 5th March 2020
<https://www.apse.org.uk/apse/assets/File/RGB%20Screen%20NI%20Climate%20Emergency%20NEU.pdf>
- (3) Newry, Mourne and Down District Council, The CANN Project
<https://www.newrymouredown.org/the-cann-project>

26. Nottingham plans to be carbon-neutral by 2028

When Nottingham city council announced in January 2019 that it intended to become the UK's first carbon-neutral city by 2028, it was the latest step in years of ambitious, innovative and forward-thinking environmental policymaking that has already yielded breath-taking results.

It met its 2020 target to reduce carbon dioxide emissions by 26% four years early; more than 40% of all journeys in Nottingham are made on public transport and solar panels have been installed on more than 4,000 council houses. Energy consumption of council buildings has been cut by 39% and it is on track to generate 20% of its energy from low-carbon sources by 2020. And last year the Department for Environment, Food and Rural Affairs concluded that the city's air pollution had fallen so much that a Clean Air Zone was not needed.

The council is 'sticking solar panels on anything that doesn't move'. By March 2019 over 6,200 solar installations had been deployed across the City. The Council has delivered over 12 MW of Solar PV including the UK's first publicly owned solar car ports.

In May 2019, the Council secured over £5million through the European Regional Development Fund (2014-20) to roll out its Energiesprong, ultra-low energy homes pilot, which will include improvements to over 150 Nottingham City Homes' (NCH) properties. The scheme will tackle some of NCH's older housing stock that is hard to heat, lifting residents out of fuel poverty. As well as being warmer, the environmental performance of the homes will be greatly improved reducing carbon emissions and improving air quality. Energiesprong is a ground-breaking whole-house renovation approach, pioneered in the Netherlands. It upgrades a home with innovative energy-saving and energy-generating measures, which include new highly insulated outside walls and windows, a solar roof, and a state-of-the-art heating system. The household's energy demand will be greatly reduced and what energy is needed can mostly be generated on site via smart use of renewable energy technologies; environmental performance will be improved to almost net zero carbon. (2)

One policy in particular, its workplace parking levy (WPL), was a "gamechanger". Introduced in 2012, the WPL is aimed at employers providing 11 or more commuter parking spaces, with an annual rate of

£415 per space. It is still the only such scheme in the UK and has not only tackled congestion and pollution but netted the council £61m for improving and “greening” public transport. That money has helped with the redevelopment of Nottingham station, an expansion of the tram network that runs on green electricity from the council’s own energy company, and the council’s fleet of 58 electric buses that has reduced carbon emissions by more than 1,050 tonnes. When the WPL was first proposed it was called anti-car but it has made Nottingham far healthier and less congested. Concerns that businesses would leave the city because of the levy were never realised. Rather, there has been a net increase of almost 25,000 jobs since it was introduced, according to council figures. (3)

The energy and transport teams have won funding from central government, Europe and other sources, and the savings the energy team generates means it actually makes a profit for the council that can be used to cross-subsidise crucial departments such as children’s services. (4)

Nottingham already powers 5,000 homes and more than 100 businesses through energy created from its own waste; is building a network of 300 charge points to encourage use of electric vehicles; and has established a bus and tram system so effective that 40 per cent of all journeys are now made on public transport – more than any British city outside London. For good measure, some 178 of those buses run off either electric or bio gas.

The council has become adept at winning green grants from both central government and Europe – such as one which has allowed it to offer grants for workplace showers to encourage more cycling. But it does not ring-fence a pot of money labelled “saving the planet”. Rather departments are expected to prioritise the environment while making business cases for new projects, strategies and budgets.

In January 2020 the Council published a draft plan for consultation declaring its intention to become the country’s first ever carbon neutral city. <http://www.mynottinghamnews.co.uk/new-decade-new-green-plan-for-nottingham/> The Action Plan is available here: <http://www.nottinghamcity.gov.uk/cn2028>

- (1) Guardian 27th Nov 2019 <https://www.theguardian.com/society/2019/nov/27/green-new-deal-nottingham-wins-top-guardian-award>
- (2) See <https://www.energyservices-ncc.co.uk/insights/homes-fit-for-2050-standards> and news update 23rd Jan 2020 <http://www.mynottinghamnews.co.uk/next-phase-of-award-winning-scheme-will-see-over-150-ultra-low-energy-homes-developed-in-nottingham/>
- (3) Independent 18th January 2020 <https://www.independent.co.uk/news/uk/home-news/nottingham-carbon-neutral-climate-change-global-warming-emissions-a9287851.html>
- (4) Guardian 27th Nov 2019 <https://www.theguardian.com/society/2019/nov/27/green-new-deal-nottingham-wins-top-guardian-award>

27. Oldham goes Solar Farming

Oldham Council has announced its intention to build a 900kW solar farm. The electricity generated from the site will be used to supply the council itself, helping with its aim of being carbon neutral by 2025. The farm will be built on disused former Ferranti football fields at Wrigley Head, with a planning application expected to be submitted by the end of February 2020. Building work is expected to begin in 2021 pending approval. The farm will complement the 120kW of rooftop solar already operating on Tommyfield Market. (1)

Councillors were about to agree, before the Covid-19 lockdown, proposals which would see Oldham Council become the first local authority in the country to become a ‘Green New Deal Council’. The strategy would set out how it will aim to deliver two ambitious targets – the council becoming carbon neutral by 2025 followed by the whole borough by 2030 – boosting the aim to be the greenest borough in Greater Manchester. It will also outline how the Council would invest in the ‘green’ sector to develop the borough’s economy, in terms of employment, business and tourism, while building on the good work it has done over previous years. It’s estimated that the current low carbon business sector in Oldham is worth £338m and employs around 2,300 people. The report highlights how a package of measures, such as the creation of a green business district and increased support for ‘green’ sector companies already in Oldham, could help grow the sector. As part of the strategy, Council officials will look to cut emissions from all council buildings and street lights and other areas it can influence such as the fleet of vehicles, business travel, schools and waste. (2)

(1) Solar Power Portal 4th Feb 2020

https://www.solarpowerportal.co.uk/news/oldham_council_planning_on_boosting_renewable_consumption_with_900kw_farm

(2) Oldham Chronicle 16th March 2020 <https://www.oldham-chronicle.co.uk/news-features/139/main-news/133278/oldham-set-to-become-the-first-%E2%80%99green-new-deal-council%E2%80%99>

28. Oxford City Council – UK’s Largest Public Solar Carport / Dundee’s electric fleet

Oxford City Council has installed what it claims is one of the UK’s “largest public solar carports” at the Leys Pools and Leisure Centre, with the canopy featuring over 350 solar panels and stretching over 48 parking spaces. It is set to generate over 80,000kWh per year, costing £175k, 90% funded by the Salix Recycling Fund. Leys pools already boasts a 122kW rooftop install above the swimming pool which, when combined with the carport, will provide over 23% of the building’s annual electricity needs. (1)

Dundee 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. 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.

(2)

(1) Solar Power Portal 23rd Dec 2019

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

(2) Guardian 16th Aug 2019

<https://www.theguardian.com/uk-news/2019/aug/16/dundee-green-revolution-charging-hubs-electric-cabs-scotland>

BBC 23rd Sept 2019 <https://www.bbc.co.uk/news/uk-scotland-tayside-central-49796127>

Video here: <https://www.smartcitiesworld.net/video/video-swapping-petrol-stations-for-charging-hubs--dundees-drive-for-100-e-mobility-by-2030>

29. Smart Peterborough

Peterborough City Council has unveiled a plan to host the UK’s largest smart, low-carbon city energy system including renewable electricity generation, energy storage and heat networks. Supported by the UK Government’s UK Research and Innovation (UKRI) arm, the £2m scheme will see additional solar and energy-from-waste electricity generation capacity installed across the city-region. To help overcome the variable outputs of these generation methods, the scheme, called the Peterborough Integrated Renewables Infrastructure project (PIRI), will also see battery storage capacity installed and businesses and households encouraged to flex their energy demands. A more flexible energy system will not only enable more renewable generation on the local grid but support the shift to electric transport.

PIRI plans include measures for businesses and households looking to install electric vehicle (EV) charging infrastructure to do so at cost parity with the costs associated with driving a petrol or diesel vehicle. As for heat, PIRI includes plans for a “next-generation” heat network to be installed to serve businesses and flats in the city centre.

The Council claims that by making “integrated” changes to heat, electricity and transport, households and businesses will see their energy bills decrease by up to one-quarter. The local authority will offer an integrated billing service for heat, electricity and mobility to enable easier tracking of savings. Once PIRI is up and running, the Council says it will provide other local authorities with details of the plan. (1)

PIRI will be funded in part by UK Research and Innovation (UKRI) Prospering from the Energy Revolution challenge and unlock major social and economic value for the Peterborough area from 2022. Significant private sector investment has been secured for and by members of the partnership - SSE Enterprise, Element Energy, Cranfield University, Smarter Grid Solutions and Sweco UK - who each have existing decarbonization expertise. (2)

- (1) Edie 26th Feb 2020 <https://www.edie.net/news/8/Peterborough-unveils-plans-for-UK-s-largest-low-carbon-smart-city-regeneration-project/>
- (2) Renewable Energy Magazine 24th Feb 2020 <https://www.renewableenergymagazine.com/panorama/peterborough-councilled-partnership-to-design-the-largest-20200224>

30. Portsmouth & West Sussex Solar Partnership

Portsmouth City Council has been assisting neighbours West Sussex County Council in delivering a major solar panel scheme. The huge initiative, known as the Solar Power for Schools Programme, saw 80 schools across Sussex being fitted with solar. In 2018, the Solar Trade Association named Portsmouth City Council one of the UK's solar pioneers after it had installed 300 rooftop solar panels on its buildings.

Portsmouth News 8th August 2019 <https://www.portsmouth.co.uk/news/politics/portsmouth-city-council-scoops-top-award-schools-solar-panel-scheme-1311044>

31. Somerset County Council Climate Challenge Fund

County Councillors in Somerset have voted to set up a Climate Change Fund with an initial £1 million to support town, city and parish councils in their ambition to take local action on the climate emergency. (1)

Somerset County Council has also produced a guide on setting up a community car-share scheme, <http://www.travelsomerset.co.uk/wp-content/uploads/2018/05/Car-Scheme-Toolkit-All-You-Need-to-Know-DW-Edit-2.doc>

See FoE's 20 actions parish and town councils can take on the climate and nature emergency. <https://policy.friendsoftheearth.uk/reports/20-actions-parish-and-town-councils-can-take-climate-and-nature-emergency>

- (1) Tone News 20th Feb 2020 <https://www.tonenews.co.uk/news/somerset-county-councils-budget-plans/>

32. Southampton Green City Charter

The overriding theme of Southampton's Climate Emergency declaration is partnership. Southampton City Council is committed to leading the way but agrees it cannot achieve its vision without the public's support. In partnership with residents, local businesses and organisations, the council has launched the Green City Charter. (1)

76 organisations, businesses and individuals have already signed the Green City Charter, committing them to work with the Council to lead the UK's efforts to be carbon neutral, live more sustainably and improve quality of life. So far £60 million has been committed by the Council for improving energy efficiency in social housing (£36m); reducing road congestion (£9m); improving cycle ways (£8m); investing in public transport (£3m) (2) Southampton City Council has also set up its own energy provider – in partnership with Robin Hood Energy – called Citizen Energy. (3)

- (1) https://www.southampton.gov.uk/images/green-city-charter_tcm63-412448.pdf
- (2) Talk by Cllr Steve Leggett to APSE Conference 15th Nov 2019 <https://www.apse.org.uk/apse/assets/File/Cllr%20Leggett%20Presentation%20-%20APSE%20-%2015%20Nov%202019.pdf>
- (3) <https://www.citizenenergyuk.co.uk/>

33. South Somerset District Council Battery Storage

A 30 MW battery energy storage system (BESS) is being developed by the South Somerset District Council (SSDC) and local company Opium Power to provide flexibility services to the grid. It is set to become the largest council-owned battery storage system in the UK. The business case was approved by SSDC's investment fund to generate further income from the asset and ensures the council can deliver services to its communities in a sustainable manner.

Solar Power Portal 25th Oct 2019

34. Stirling District Heat Network

Stirling Council, has already installed over 37,000 solar panels on more than 3,900 council housing properties, and plans to install more than 330 battery storage systems by March 2020. (1)

The Stirling District Heat Network harnesses 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, but here is scope for the network to also be expanded across the city. (2)

Funding for the project came from the Scottish Government's Low Carbon Infrastructure Transition Programme, Stirling Council and SWH. Stirling Council and Scottish Water did a joint presentation on the scheme, to the APSE Energy Summit in October 2019. (3)

Stirling Council and SWH are looking at the possibility of replicating the scheme at the former mining village of Fallin. Scottish Water is also working on a similar project at the Clyde Gateway, and is looking at a scheme for Firrhill School in Edinburgh which would extract heat from the Firrhill Tank which is used to store drinking water.

- (1) Stirling News 29th October 2019 <https://www.stirlingnews.co.uk/news/18000427.stirling-leading-light-solar-power-award/>
- (2) Video: <https://www.scottishwater.co.uk/en/About-Us/News-and-Views/070819-First-Minister-at-StirlingGreen-Heat-Project> and Stirling Council 7th Aug 2019 <https://www.stirling.gov.uk/news/2019/august2019/stirling-s-pioneering-green-heat-network-gets-seal-of-approval-from-first-minister/>
- (3) https://www.apse.org.uk/apse/assets/File/Day%201%20-%20Session%202_1%20-%20Roz%20Smith%20%26%20Donald%20MacBrayne.pdf

35. Sunderland Ground Source Heat Pumps

Residents in 364 homes across seven tower blocks in Sunderland are getting their gas boilers replaced with heat from ground source heat pumps. There will be a ground source heat pump for each flat which will also be connected to a district heating system consisting of ambient shared ground loop arrays. An underground aquifer will provide the heat source for the tower blocks, accessed via open loop boreholes drilled to depths of 60m.

Unlike other district heating scheme, each tenant will have an independent heat pump which means they can shop around for their electricity deal. Gentoo Group – a social housing provider - is delivering the 'Core 364' project with the support of Engie and ground source heat pump specialists, Kensa Contracting. Work started in October, with all systems expected to be replaced by late Summer 2020. The heating system will provide heat and hot water at a much-reduced cost. (1)

Kensa is also working with Sunamp heat batteries on a scheme in Oxford. (2)

- (1) New Power 20th November 2019 <https://www.newpower.info/2019/11/sunderland-tenants-to-swap-gas-for-ground-source-heat/>
- (2) For more info see the presentation made by Kensa to the APSE Energy Summit in October https://www.apse.org.uk/apse/assets/File/Day%202%20-%20Session%205_2%20-%20Matthew%20Black.pdf

36. Swindon gets to 97%

Swindon produces enough electricity to power 97% of the borough's houses from renewable sources. The council's target is to generate 200 megawatts of electricity from renewable sources, such as solar power because that is the amount needed to power every home in the town. It currently produces 195 megawatts. It hopes to have the capacity for the full 200 MW installed by next year. There are currently 43 solar farms operating in Swindon.

This is Wiltshire 9th Nov 2019 <https://www.thisiswiltshire.co.uk/news/18025809.solar-power-enough-nearly-everyswindon-home/>

37. Tipperary Energy Agency

Tipperary Energy Agency (TEA) has been successfully supporting Tipperary to reduce its energy demand for over 20 years. The agency has a proven ability in enabling people, communities and the public sector to become more sustainable in their energy use. The Agency identified a €500 million sustainable energy opportunity for the county and continues to work to accelerate the transition of Tipperary to a low carbon future. TEA works on Community Energy, Renewable Energy, Energy Management and Energy in Buildings. It has led major housing retrofit schemes, pioneering community wind farm developments and numerous successful biomass projects. It strives to implement viable sustainable energy solutions that will reduce costs and energy use.

TEA's social enterprise model enables it to provide cost effective professional services at a local and national level. As a result, Tipperary County Council continues to be a leading local authority in energy performance with pioneering projects such as Ireland's only community operated wind farm in Templederry, Ireland's first Ecovillage in Cloughjordan and a massive Photovoltaic project across 9 public buildings.

In 2019 TEA delivered €2.7 million worth of projects through SEAI's Better Energy Community grant scheme. There were 13 beneficiaries in total including local authorities, public sector organisations, private sector organisations including a hotel, small-medium sized enterprises, community centres, and a scout hall. Works included Smart LED solutions, renewable heat pump solutions, building fabric upgrades, solar photovoltaic panels, mechanical ventilation systems and heating controls.

TEA has been working on domestic retrofit projects since 2004, supporting the retrofit of thousands of houses. In 2015 the Agency went a step further towards Near Zero Energy Building (NZEB) retrofit and as a result the SuperHomes Ireland project was born. 10 homes across Ireland were upgraded as part of its pilot project to install a combination of the most cost-effective measures in one package. The potential of this whole house approach was demonstrated by all 10 homes achieving top energy rating and a 100% satisfaction rating from the homeowners involved. In the first full year of the scheme – 2016 - SuperHomes carried out more than 60 deep retrofits. In April 2017 SuperHomes 2.0 was launched in Limerick Institute of Technology. This 2-year ground-breaking research programme had the core aim of optimising air source heat pump technology in domestic retrofits. Since the SuperHomes programme began it has retrofitted over 200 homes reaching as far as Donegal and West Cork. Starting out with a small team, SuperHomes has now grown to a team of six engineers, programme manager, retrofit advisor, project coordinator and a support team. (2)

(1) <https://tippenergy.ie/>

(2) <https://superhomes.ie/about-us/> In this video the SuperHomes team explains how our home retrofit process works, from application to survey to design and works. https://youtu.be/SVbyfnBH_3s

38. Zero Carbon Wakefield

On 23 May 2019 Wakefield Council declared a Climate Emergency and has pledged to become a Carbon Neutral organisation by 2030. In order to achieve this the Council is developing an action plan and roadmap ready for launch in early 2020.

This action plan will build on the good progress already achieved through the Carbon Management Plan and more recently the Energy Plan that was approved by Cabinet last year. The Council has already achieved a 55% reduction in carbon emissions from 1990 to 2017/18. Some selected projects already being delivered or being developed include:

- LED lighting upgrades at 15 Council sites;
- Over 30 Council buildings assessed for solar photo voltaic (PV) systems and 8 systems will be installed;
- The Council is exploring the potential to create 'Energy Parks', including solar energy generation and battery storage, on its land;
- The Council has appointed specialists to review its vehicle fleet;

- A 3-year programme to upgrade 43,000 streetlights with low energy LEDs.

The Climate Emergency Declaration also includes a commitment to support and work with relevant agencies towards making the entire area zero carbon within the same timescale. For example, over 8,500 local residents have been supported with over 11,000 improvement measures through the Council's ongoing home energy efficiency programme, which is helping to reduce domestic carbon emissions. (1)

The Council has produced a useful checklist of the challenges on the road to zero carbon.

- Baseline our challenges
- Ensure we communicate with internal & external stakeholders
- Ensure we achieve Elected Member buy in
- Develop a clear action plan
- Internal challenge
- External challenge
- Establish clear governance
- Ensure effective Asset Planning in place
- Secure funding / staffing

The Council is drawing up a communication plan to create an understanding at what is a climate declaration; enabling two-way dialogue with residents, staff, partners and stakeholders and encouraging everyone living and visiting Wakefield to play a bigger part.

The Action Plan has identified 7 sites for roof top solar. Planning is also underway for two solar farms which together would be sufficient to meet the entire Council's corporate electricity consumption (55GWH). The Council is investigating if mine water extraction could be used for a city centre district heating scheme, supporting key public estate building. Linked to this is the creation and expansion of the current Anaerobic Digestion facility. Wakefield is also a part of the Northern Forest initiative - carbon offsetting 50 million trees between 2017 and 2042. (2)

- (1) <https://www.wakefield.gov.uk/about-the-council/policies-and-procedures/zero-carbon-wakefield-council>
- (2) For more on this see Presentation to APSE Energy on 25th Feb 2020 [https://www.apse.org.uk/apse/assets/File/Glynn%20Humphries\(1\).pdf](https://www.apse.org.uk/apse/assets/File/Glynn%20Humphries(1).pdf)

39. Wandsworth's Climate Change Action Plan

Wandsworth Council has approved plans to transition to 100% zero-carbon energy, aiming to become carbon neutral by 2030 and zero carbon by 2050. The plan, which is part of the London borough's Climate Change Action plan. The plan aims for the council to invest in low carbon technology, such as solar PV and procure sustainable, zero-carbon energy to reach the 2030 and 2050 targets. It was set in action in 2019, after the council declared a climate emergency, with the aim to make Wandsworth inner London's greenest borough. The plan includes a list of themes such as air quality, energy management and planning and sustainable development. (1)

Additionally, the council is taking action to decarbonise its operations, including audits to identify where energy efficiency measures can be implemented, investigating how energy-optimisation technologies can be deployed and exploring the options for electrification and the use of "green" gas. The plan also involves spending £5 million on initiatives such as improving cycling infrastructure, planting more trees and reducing single-use plastic. (2)

The council already has solar PV panels on the roof of both the Town Hall and Reed House, which were installed in 2012. They have been lauded as a success with the panels producing more than 37,000KW in the first six months of operations alone, and having a lifespan of 25 years. (3)

- (1) Power Technology 21st Feb 2020 <https://www.power-technology.com/news/london-wandsworth-council-approves-100-zero-carbon-energy-plan/>
- (2) Energy Live News 24th Feb 2020 <https://www.energylivenews.com/2020/02/24/wandsworth-council-approves-plans-to-commit-to-100-clean-power/>

- (3) Solar Power Portal 20th Feb 2020
https://www.solarpowerportal.co.uk/news/wandsworth_council_takes_massive_step_towards_carbon_neutrality

40. Warrington's Green Innovation

In September 2019, Warrington Borough Council (WBC) approved a new green energy strategy. (1) The strategy, which follows the council's Climate Emergency declaration earlier that year, details the local authority's plans to become carbon neutral.

Crucial to the Council's outlook is the idea of generating an income. In 2010 WBC began a social housing PV programme aimed at tackling fuel poverty. Since then the scheme has delivered 3.595MWp of solar PV across 3,001 social homes and 3 sheltered housing schemes. In 2014 WBC decided to look into the potential of larger PV arrays. During 2015 222kWp of PV was installed on schools, a crematorium, offices and the local Rugby Stadium. It has also recently installed more than 3,000 solar panels at the Plastic Omnium building (a manufacturer of plastic components for automotive clients such as Jaguar Land Rover) alongside 60 electric vehicle charging points at a multi-storey car park. The non-domestic projects are anticipated to return over £2.3m to the council over the next 20 years and save over 13,000 tonnes of CO2 emissions.

WBC has been a trailblazer by investing in energy bonds. It purchased around a £60m share of the Wroughton Solar Farm in Swindon, jointly with Thurrock and Newham Councils. Here, the Council did not operate the asset, but gained a financial return from its ownership, with the usual attendant social gain coming from the renewable energy facility. Other bonds have also been entered into, with the Council considering carefully how long to maintain an interest and when to liquidate interests.

WBC has also invested in its own solar farms in York and Hull which will provide the equivalent amount of electricity to power 18,000 homes. These farms will be used to power all council buildings, with the remainder of the electricity generated being sold to the grid or to other public sector organisations. The 34.7MW solar facility in York uses technologies such as bifacial panels and trackers to increase solar generation by 20%. It also boasts a co-located battery storage project allowing it to maximise revenues and help balance the local grid on a 24/7 basis. (3)

The Council's Green Energy Strategy details its ambitions for the future. It details plans to support Warrington's Own Buses to invest in a green energy fleet and continue to replace Warrington's street lights with LEDs. It also announced the Council's intention to intervene in the energy market. The major aim of this would be to reduce fuel poverty in Warrington and deliver the Council's Emergency Climate change declaration. WBC has now decided to pay £18 million to buy a 50% stake in Clydebank-based Together Energy. The Council will also grant a £4 million loan to the firm. (3)

The council also has plans to establish a social impact fund, with a focus on encouraging projects with long-lasting social impact to promote a step-change in reducing carbon emissions in the country. Acknowledging the importance of improving carbon literacy – making people aware of the impacts of carbon dioxide and how they can play their part – is also a central part of the council's green energy strategy.

- (1) Warrington's Green Energy Strategy https://www.warrington.gov.uk/sites/default/files/2020-02/green_energy_strategy.pdf
- (2) Warrington Borough Council 10th Sept 2019 https://www.warrington.gov.uk/news/council_approves-green-energy-plans
- (3) Energy Live News 19th Dec 2019 <https://www.energylivenews.com/2019/12/19/gridserve-completes-uks-most-advanced-solar-farm/>
- (4) Warrington Guardian 6th Nov 2020 <https://www.warringtonguardian.co.uk/news/18018752.council-leader-pressed-18m-energy-deal/>

41. Warwick seeks people's backing to increase council tax for climate change action

Warwick district council is the UK's first authority to offer residents a referendum on whether to pay about 3% extra in council tax to fund a climate action fund. The extra money, an estimated £3m a year, is for a ring-fenced fund to provide energy-efficient housing, improved air quality and, crucially, flood defences.

Since 2012, councils must hold a vote if they want to raise tax by more than a limit set by MPs (now 3%). Only one has been held, after the Bedfordshire police and crime commissioner asked in 2015 for 48p more a week from those in band D properties. It was rejected by 70% of voters. (1)

Plans to become the first local authority to hold a referendum on increasing council tax in order to raise funds for tackling climate change were approved unanimously by councillors from all parties. (2) Unfortunately, the referendum had to be cancelled along with council tax increase due to the coronavirus. (3)

- (1) Times 22nd Feb 2020 <https://www.thetimes.co.uk/edition/news/warwick-tory-leader-seeks-peoples-backing-to-increase-council-tax-for-climate-change-action-0jvm6xglg>
- (2) Local Government Chronicle 27th Feb 2020 <https://www.lgcplus.com/uncategorized/district-approves-34-climate-emergency-tax-hike-27-02-2020/>
- (3) Leamington Courier 27th March 2020 <https://www.leamingtoncourier.co.uk/news/people/climate-change-referendum-warwick-district-cancelled-along-council-tax-increase-2520265>

42. West of England Combined Authority

The West of England Low Carbon Challenge Fund is offering £500,000 to microgeneration projects of up to 5MW. This will be split between renewable energy projects across Bath and North East Somerset, Bristol, North Somerset and South Gloucestershire council areas.

Local groups, such as community energy companies, can apply for between £100,000 and £500,000 to cover 40% of eligible, capital costs. The project is being funded as part of the £1.7 million Low Carbon Challenge Fund, which is being managed by the West of England Combined Authority and funded by the European Regional Development Fund. Initial Feasibility grants of up to £40,000 are also available to projects in the region, through the Rural Community Energy Fund.

Bristol City Council has also sought to encourage community energy projects with the launch of a £50,000 community benefit fund by the Bristol Energy Cooperative. The South West has already benefitted from EU energy funding, with Bristol City Council, in partnership with Devon and Plymouth councils, securing a €1.9 million (£1.7 million) grant in 2019 from the European Investment Bank and the European Commission, to support the development of a “new wave” of projects. (1)

- (1) Solar Power Portal 24th Feb 2020 https://www.solarpowerportal.co.uk/news/west_of_england_set_to_benefit_from_community_energy_fund

43. West Suffolk Council-owned Solar Farm Smashes Generation Records

A council-owned solar farm 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

44. Windsor & Maidenhead’s low carbon actions

As part of the Council’s pledge to reach a carbon neutral position by 2050, all electricity bought will now be generated by technologies such as solar, wind and hydro power. This will include all electricity used in schools managed by the Royal Borough, as well as all street lighting. The Town Hall, Maidenhead, is already home to a large number of solar panels, and more will be installed on the new Braywick Leisure Centre and other locations around the borough. (1) A community solar scheme - MaidEnergy, launched in 2019, is to install solar PV on local buildings including schools, sports centres and places of worship. (2)

(1) RBWM 15th Aug 2019

https://www3.rbwm.gov.uk/news/article/360/electricity_to_come_exclusively_from_renewable_sources

(2) Solar Power Portal 17th June 2019

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

45. Wokingham to embrace 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 to support the goal of being carbon neutral by 2030.

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

46. Wolverhampton NHS Solar Partnership

City of Wolverhampton Council has announced a partnership with the Royal Wolverhampton NHS Trust to develop a solar farm at a former unused landfill site. The City Council is working closely with The Royal Wolverhampton NHS Trust to assist them in meeting their carbon reduction commitments by providing them with electricity from the solar array.

Wolverhampton 4th March 2020 <https://www.wolverhampton.gov.uk/news/city-council-announces-plans-its-first-solar-farm-development>

47. York Solar Charging Hub

A solar carport backed up with battery storage is set to be built in York as part of its 'HyperHubs' project. The solar carport has a proposed generation capacity of up to 400kW, powering a mix of 160kW and 7kW electric vehicle (EV) chargers.

The solar for the eight ultra-rapid chargers is to be located on canopies located over 254 parking spaces in the adjacent Park and Ride car park, with solar also going onto canopies above the five 7kW chargers, which will service 10 parking bays. A battery storage unit is also set to go onto the site to store any excess solar, with the solar expected to generate up to 380,000kWh of electricity per year.

The carport is the first in the HyperHubs element of the Go Ultra Low York Programme and will be located at the Park and Ride site at Monks Cross. A second site at Poppleton Bar has also gone into planning. The HyperHubs project will see multiple hubs located around the outer ring road of York, with the aim of providing charging in the key traffic flow corridor and accelerate the uptake of EVs in the city by supporting fleets, residents, through traffic and visitors to have the confidence to use EVs.

The plans are still subject to approval from the City of York Council. If approved, building will commence in January 2020 with an aim of completion in six months. (1)

Meanwhile the Council is planning to invest £15.3m in 233 electric vehicles by 2030. (2)

(1) Solar Power Portal 12th Sept 2019

https://www.solarpowerportal.co.uk/news/york_set_for_400kw_hyperhub_solar_carport_with_storage

(2) Energy Live News 12th March 2020 <https://www.energylivenews.com/2020/03/12/york-invests-15-3m-in-citys-green-fleet/>