



Toolkit: a community wealth building energy transition

Part 3: current and emerging practice



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Current and emerging practice outlines areas already working to progress the energy transition using community wealth building principles, and approaches which can help address the challenges of scale and finance.

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Current practice using community wealth building approaches to the energy transition

We are already seeing strong examples of how local authorities can take community wealth building approaches to the energy transition through specific projects and initiatives. The following examples of current and emerging practice have been selected to provide inspiration as to how councils can advance this approach where they are.

Energy generation: Renewable community energy

Alternative models of ownership within the energy system, particularly in relation to energy generation, have been on the rise for some time. Many councils across the UK are exploring the potential to establish their own energy projects – such as North Ayrshire’s Nethermain Solar PV Farm, which will provide 34% of the Council’s current energy requirements on a Council-owned former landfill site.¹ This solar farm, in line with North Ayrshire’s community wealth building strategy, will provide opportunities for local suppliers, make best use of public sector land and keep finance in the area, all while supporting wider ambitions around municipalisation.

We can further ensure our communities benefit from the necessary reshaping of our energy systems by placing renewable energy generation, at least in part, into the hands of local people and communities. This is particularly important as renewables will be key to phasing out fossil fuel energy generation by 2035, as outlined in the UK Committee on Climate Change’s sixth carbon budget.² As such, we need to ensure that local people benefit from this shift in energy generation.

A key way of doing this is through community energy. Community energy is defined by the International Renewable Energy Agency (IRENA) Coalition for Action as the “economic

and operational participation and ownership by citizens or members of a defined community [...] in a renewable energy project”.³ The emphasis of community energy is on projects centring local engagement, leadership and control, which result in benefits for local communities. Renewable community energy in this context is the community ownership of renewable energy generation, but the term community energy could relate more broadly to projects and organisations addressing the energy transition through interventions such as retrofit or tackling fuel poverty.

Not only is it essential as part of a wider strategy to achieve the energy transition, community energy initiatives can retain seven times more value in the local economy than commercial models of renewable energy.⁴ They have also been proven to receive strong levels of support from local people, and reduce levels of local opposition through participation, participatory decision-making and the fairer distribution of economic benefits. In addition, initiatives such as Plymouth Energy Community have developed models which deliver further benefits to the local community by investing the money made through energy generation, and leveraging funding to enable the delivery of fuel poverty initiatives, reducing bill costs and improving the quality and warmth of peoples’ homes.

These are added benefits of establishing community energy initiatives in a council’s locality,

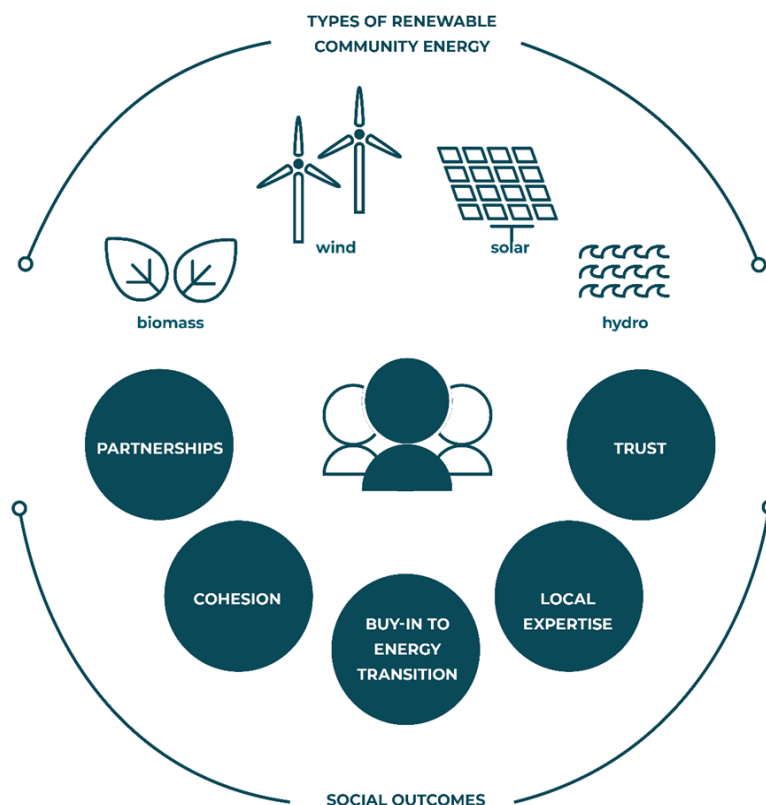
which will both support wealth to ‘stick’ locally and help to nudge people in the locality to a deeper appreciation of the changes required for the energy transition, and how they can be involved in making them happen. While not yet common practice in the UK, community share offers which also cater for marginalised groups who may be adversely affected by the current energy system should be a part of any local approach to introducing community energy – ensuring the benefits of community energy reach all those who need them.⁵

Community energy has been on the rise since the early 2000s, with groups of citizens setting up their own projects to advance the energy transition where they live. Now, local authorities must consider how they can support the creation of more alternatively owned forms of energy

generation on the local level to both increase the availability of renewables to support the energy transition, but also to ensure that the money invested in, and generated by, these initiatives benefits local communities. Local authorities can use community wealth building approaches to support the creation and development of community energy initiatives, which in turn generate and recirculate wealth locally.

Energy Cities have produced [a comprehensive guide to the role of local authorities in supporting community energy](#), with a focus on renewable energy communities (see [Plymouth Energy Community](#)). You may want to explore their guide for more ideas about how you can cooperate with your communities to establish a community energy project.

Figure 1: Types of renewable community energy



How councils can use community wealth building to support the development of renewable community energy



SOCIALLY PRODUCTIVE USE OF LAND

Councils have a significant amount of land and property at their disposal. There is opportunity to not only use spare or undeveloped land to give space to community energy groups for the generation of renewable energy, but council properties can also be used to mount solar and generate energy through roof leasing, using power purchase agreements to sell energy back to the council.



FAIR EMPLOYMENT AND JUST LABOUR MARKETS

Councils should consider their staff as a resource in supporting the establishment of community energy projects. See [Plymouth Energy Community](#) as an example of this.



PROGRESSIVE PROCUREMENT OF GOODS AND SERVICES

Councils spend a huge amount on energy ([£863m with the Big Six energy companies in 2018](#)). Working with a local community energy group to install renewables on council property and procuring energy from them is one way to support the development of these initiatives locally.



MAKING FINANCIAL POWER WORK FOR PLACES

See [Financing the energy transition](#), on how councils can use finance to support the development of renewable community energy. Councils should explore how they can use their resources, reserves and borrowing power to enable the development of the energy generation infrastructure needed to achieve energy transition. See the Oldham case study in Part 4 of this toolkit for more information.

There is also opportunity to work with local energy hubs to ensure money spent on local energy also builds community wealth.



BUILDING A DEMOCRATIC ECONOMY

Business support provided by local authorities and other organisations (e.g Local Enterprise Partnerships and Growth Hubs) should consider community energy as an area worth investing in. Energy providers such as Local Energy North West, funds such as the Rural Community Energy Fund, and energy agencies (e.g Carbon Co-op and Tipperary Energy Agency) already provide this support - councils should seek to develop this support locally where it does not already exist as part of a broader agenda building alternative forms of ownership and new supply chains locally.

Enablers and barriers to councils using this approach to establish community energy projects – Oldham and Plymouth Councils

Oldham Council and Plymouth Council have both carried out extensive work supporting the establishment of community energy groups in their areas – Oldham Community Power (OCP), and Plymouth Energy Community (PEC).

ENABLERS

Local political buy-in

Both Oldham Council and Plymouth Council had high-level political buy-in to the community energy agenda, which was a significant enabler in helping the schemes get off the ground.

Resource provided

Both councils provided financial or human resource to support their local community energy projects to establish. Oldham Council provided a bridging loan of £250,000 when OCP struggled to gain shareholders in their first community share offer, building trust locally in the project and supporting it to become established. Plymouth Council supported the development of PEC through the use of a service level agreement to provide staff time. This arrangement was particularly important early on in the project as PEC did not have the HR provision or regulation in place they would need as an employer, and could rely on the council to take care of those functions. This allowed PEC to free up staff time and money to focus on the delivery of projects.

Access to potential land & property

The success of both community energy groups relied on access to land and property through the council. Oldham Council's first event introducing residents to the idea of a community energy company asked 50 residents to propose school and community buildings (in Council ownership) which could be used for roof-mounted solar PV. The sites were then scoped by the council, resulting in installations on 5 schools and the Holt Street Neon Hub. Plymouth Council have provided PEC space on school roofs and the Plymouth Life Centre

BARRIERS

Finance

Finance was a challenge Oldham experienced in particular. OCP originally advertised a share offer for local people to invest in the scheme, but due to community scepticism and a lack of buy-in, the council decided to provide a bridging loan for the project. This bridging loan was paid back by the project over time, and meant that the Council remains a key stakeholder.

Procurement

Both councils and community energy companies had to contend with the challenge of procurement. There is a huge market for community energy groups and councils to work together, with mutual benefits, but the council procurement teams were uncomfortable with procuring from the community energy projects due to the risks posed. PEC reflected that for community energy groups to develop a project where they can rely on spend from the council, they need to agree a price before the project starts (rather than once it is in motion), which is not a familiar way of operating for councils. Nowhere has resolved this challenge yet, but significant work is being done to address this challenge by Devon Council and Plymouth Council.

Expertise

Community energy groups often struggle to access the expertise they need to set up. Council involvement in Plymouth enabled PEC to access the knowledge and capacity of its Low Carbon team, and OCP brought in experts to advise on community share offers, setting up OCP, how to navigate finance, and identifying the responsibilities of directors. They also ensured that the first three company directors were chosen based on the expertise they could provide the group.

to install solar PV. Significantly, they provided a site for the ground-mounted Ernesettle Community Solar array which was a previous landfill and within a blast zone for a local MOD base. This land was unavailable for residential development, and the council transferred the land to the Four Greens Community Trust to enable them to draw funding from the ground rent paid by PEC for the use of the site for the solar array.

■ Community buy-in

Both Oldham and Plymouth had to contend with gaining community buy-in to establish their projects. Without buy-in, raising the funds needed and getting community backing to establish larger projects would be incredibly difficult. Plymouth Council utilised PEC and FGCT to ensure community buy-in to Ernesettle Community Solar in response to a negative experience the local community had with another private solar developer (where the developer did not deliver on its promise to create a community benefit fund). The community were very annoyed and trust was lost in the process. As such, significant work was done to build the relationship between PEC, FGCT and the community, including events like Apple Day, tree planting days, information drives, door knocking, leafleting, and informing people about why the scheme would be good for them locally. This involvement has been sustained, and PEC has 100 local people directly involved in supporting the organisation to run, 900 local supporters and an elected board for every group which is part of the PEC family.

■ Inconsistency/short termism of national energy policy

The short term nature of national policy on climate change is a significant challenge. This inevitably has an effect on local programmes of work, even within a community wealth building framework. Both schemes had to navigate the removal of the Feed in Tariffs and changes to policy relating to solar PV on schools. This had a particular impact on how the schemes developed sustainable approaches to finance. Alternative approaches to finance are being developed (see [Local Energy North West for feasibility studies](#) exploring alternative models of finance for community energy projects establishing in an unsupportive national policy context).

See Part 4: Deep Dives for more detail about Oldham Community Power.

CASE STUDY

Plymouth Energy Community (PEC) and Ernesettle Community Solar

PEC originated as an idea within the Council's Low Carbon Team, and was lent political support by a councillor keen on developing more local co-operatives. PEC's relationship to the council was cemented as the CEO of PEC was originally Head of the Low Carbon Team, and the council continues to provide staff time based on a service level agreement. As the Council had a distinct interest in the success of the project, it provided seed funding to support its establishment, and PEC became a community benefit society in 2014.

The company was structured in a way that allowed it to offer energy advice/residential energy efficiency work alongside PEC Renewables, which was set up for asset ownership to deliver renewables projects. Initially PEC delivered a series of rooftop solar projects, then moved on to deliver Ernesettle Community Solar.

Ernesettle Community Solar was built in 2016 and delivered through work with the council and Four Greens Community Trust. The council had land it could not develop or farm due to its nature as a land-fill and location within the blast zone of an MOD site. PCC wanted to add community value to the site, so offered the land to Four Greens Community Trust as a mechanism to give the community group a source of income without grant funding. At the time FGCT was struggling with funding, but as the land was transferred as a commercial asset, FGCT were able to offer the land to PEC to develop a solar array. PEC were able to make money from the energy generation (with surplus helping to fund fuel poverty work), and pay FGCT an annual rent for the land (£18k in year one, then index linked in following years). FGCT have used this money to develop playing fields locally, and they can now plan projects with confidence due to a level of income certainty.

The combination of PEC and FGCT were crucial in obtaining local support for the solar array, and the two have continued to build trust in the local community. This relationship means that the council can now work with PEC and FGCT to deliver more projects, with a clear connection into the community to gauge and inform local opinion about projects like their mobility hubs (supporting Plymouth's efforts to decarbonise the local transport system).

PEC has grown significantly since its establishment and is working with the council to make local renewable energy generation work for local people and businesses. They are exploring the potential of a private wire to provide electricity to a South West Water treatment works (near the Ernesettle Community Solar site) which will allow PEC to sell the energy at a higher rate than selling directly to the grid (which is currently how they generate income from the site). This will also benefit the Works as generation is local, meaning there is less energy lost in transmission, and no need to pay for grid connection or balancing fees. This means PEC will not just be contributing to the reduction of carbon emissions on the energy grid, but this reduction in emissions will directly relate to energy use within Plymouth itself.

PCC and PEC also recognise the significant potential of the connection between public sector energy consumption and community energy projects, but have identified procurement as a significant barrier to progressing this agenda. They are pushing forward developing solutions (such as using a contract for difference to bypass the procurement barriers) and sharing learning with Bristol and Devon Councils, which are also seeking to develop the link between community energy and councils. One outcome from this learning is a [local authority toolkit on synthetic PPAs](#), which will be of use for councils that are seeking to purchase energy directly from renewable energy generators (such as community energy projects).



PEC's TOP TIPS

Developing partnerships with community energy groups is a great way to encourage their development. If a council has a community energy group in its area, make them a key part of local climate emergency plans and build a long-term relationship with them.



Councils cannot treat community energy groups like they would treat large energy providers (e.g seeking immediate cheap energy on a green tariff). A council will need to work with the group to agree a price for energy at an early stage before the infrastructure is built so that the group are not taking unnecessary financial risk. Early engagement around this is important.

Improving energy efficiency: Retrofit

In the UK, domestic properties account for almost one-third of total energy demand and one-fifth of carbon emissions. Of this, over three quarters of household energy demand is for space and water heating – currently mostly using gas. We have huge demand for energy in our homes, with heating and hot water for domestic properties accounting for 15% of the UK's emissions.⁶ This is mostly because the UK has some of the oldest and least well insulated housing stock in Europe⁷ – this, combined with high energy prices and low income, has led to fuel poverty for 13.4% of households in England, 24.6% in Scotland, 12% in Wales and 22% in Northern Ireland.

While frequently the discussion around energy efficiency focuses on reducing the use of energy, the reality of fuel poverty means that many people can't afford to heat their homes, which directly impacts their health and wellbeing.⁸ Many people should be using more energy to heat their homes, but they are hamstrung by the cost of energy and the challenge of living in housing which is hard to heat. As such, limited approaches to retrofit which do not address the cost of energy can miss the mark when trying to tackle energy poverty – good understandings of what is causing fuel poverty will help councils to find solutions which will work locally. As fuel poverty is such a significant issue, alongside poverty as a whole in the UK, approaches to retrofit that build community wealth should not push the financial burden of retrofit onto those most likely to be affected by an increase in housing costs or bills.

Retrofit is an approach to reducing carbon emissions and demand for energy by improving the energy efficiency of existing homes. Methods of retrofit vary from light touch approaches such as switching to more energy efficient lighting and installing traditional cavity wall and loft insulation, through to whole house (or “deep”) retrofit models. Whole house retrofit (one model of which is [Energiesprong](#)), is a full-house upgrade that can turn homes into renewable energy generators as well as reducing a home's total energy demand by 80%.

Currently, whole house retrofit is an expensive (though very effective) option and the high costs involved mean that heavy subsidy is often required to deliver it in the UK. This is because local supply chains to deliver this work simply do not exist. Building the supply chain and supporting businesses with different forms of ownership to enter this space presents a huge opportunity for local authorities to retain wealth in the local economy.

[Green Alliance have produced a report](#) that discusses the potential of whole house retrofit to move us toward meeting our 2050 carbon reduction target. This is in light of the significant limitations of conventional retrofit methods which are not enough to achieve the 80-100% reduction in carbon emissions needed by 2050. The report also explores the significant savings that could be realised if deep retrofit were committed to at scale.

Councils across the country have been developing programmes to retrofit existing housing stock, and Nottingham City Council and Lewes District Council have demonstrated, and are experimenting with, ways to build community wealth whilst doing so.

How councils can use community wealth building to support the delivery of retrofit



SOCIALLY PRODUCTIVE USE OF LAND AND PROPERTY

Commit to retrofitting publicly owned buildings and social housing to support the development of a local market.

In addition, consider leasing out under-utilised public land to fledgling businesses in the retrofit supply chain to build off-site elements.



FAIR EMPLOYMENT AND JUST LABOUR MARKETS

Work with anchors to support upskilling the local workforce to meet the vocational and professional skills needed to provide high-quality retrofit.

After making the commitment to retrofit homes, local authorities need to lay the groundwork for growing the skills required to deliver on that commitment. Investing in retrofitting older properties over the long term will create demand for people to design, make and install these retrofits. Collaboration with local education providers to ensure young people and adult learners have the skills they need to enter this industry will create a pipeline of local talent ready to move into new green jobs.



MAKING FINANCIAL POWER WORK FOR PLACES

Draw money into local retrofit schemes (sourced locally or nationally) and protect the most vulnerable from the high costs of retrofit, or the indirect high costs of poor-quality housing that has not been retrofitted.

Plymouth Energy Community are a charity and social enterprise that have used community share offers to generate millions of pounds to invest in renewable energy and energy saving schemes. By reinvesting surplus into these schemes, this approach has ensured that Plymouth Council's approach to the energy transition addresses some of the needs of those experiencing the sharp end of poor quality housing and high energy prices, which contribute to fuel poverty.

Government launched the Social Housing Decarbonisation Fund Demonstrator in October 2020. £62m in funding was awarded to 17 local authorities to explore innovative ways to deliver deep retrofits for social housing. These projects will come to a close in December 2021. The findings from this demonstrator will shape the £3.8bn Social Housing Decarbonisation fund which is due to launch in the 2021-2022 financial year – with £1.75bn of funding committed for the Social Housing Decarbonisation Scheme and Home Upgrade Grants in the government's Net Zero Strategy.¹¹ Local authorities play a key role in bringing funding into their localities from this fund and others, and ensuring such funds build community wealth.



DEMOCRATISING THE LOCAL ECONOMY

Support the development and establishment of a local supply chain of SMEs with diverse ownership models to design, deliver and install local retrofit schemes.

This can be achieved through delivering business support tailored to supporting the development of co-operatives. Nottingham Council spent time growing their local supply chain and building trust with local SME's so they were willing to invest in growing their skills and capacity to enable them to deliver Nottingham's whole house retrofit projects.

[People Powered Retrofit](#) - a partnership project between Carbon Co-op (a community energy intermediary) and URBED (a design practice with high-quality technical expertise) – is another model of alternative ownership which can be looked to for inspiration. It seeks to deliver a householder led retrofit service for owner-occupiers and kickstart the development of new local markets for energy efficiency.



PROGRESSIVE PROCUREMENT OF GOODS AND SERVICES

Understand what skills/businesses are available locally and put appropriate support in place to allow them to access work in the retrofit market.

Carry out a skills mapping exercise and identify any gaps in the market locally. Consider how local authorities might stimulate the development of businesses to fill these gaps. Where existing local skills and knowledge (carpenters, joiners, decorators etc.) are identified and could be utilised to deliver retrofit contracts, consider how it can be made easier for them to access this new work, breaking up contracts into smaller lots for example.

Enablers and barriers to using community wealth building approaches to enabling retrofit – Nottingham City Council and Lewes District Council

ENABLERS

Local political buy-in

Both Nottingham City Council (NCC) and Lewes District Council (LDC) have high-level political buy-in to addressing the climate emergency through retrofit. This was a significant enabler in helping the deep retrofit pilots get off the ground in Nottingham and a great starting point for the conversations happening in Lewes right now about the best way to go about retrofitting their housing stock.

Resource provided

NCC provided match funding to European money secured to deliver the deep retrofit pilot on Nottingham City Homes properties. They have continued to invest their own resource in terms of time (a team at the Council working on retrofit) and money to maintain the delivery of retrofitting in Nottingham. LDC have invested a significant amount of time in understanding the climate emergency and figuring out how they can have the biggest impact in terms of reducing their carbon emissions through retrofit. Time to research, understand and agree a way forward should not be underestimated. LDC made space for these conversations alongside a series of other pressing issues, including allocating funding to subject specialists which identified methods of community wealth building to build local supply chains to support retrofit.

Access to potential land and property

NCC is focussing its deep retrofit work on their social housing stock providing suppliers with a guarantee of work for the foreseeable future. Their key local supplier in turn has worked closely with the team at Nottingham and Energiesprong to develop the right technology for the retrofit taking place there. They have been open minded and flexible and have grown to meet the needs of the retrofit programme.

Nottingham City Council and Lewes District Council are both carrying out work to support the development of local supply chains to deliver retrofit in their areas.

BARRIERS

Supply chains

When NCC began their retrofit journey they put a contract out to tender for a supplier to help them deliver deep retrofit. There were very few bids received and only one contractor genuinely had the potential to deliver. Nottingham have worked hard at building their relationship with their key contractor and now have a fruitful relationship with both parties keen to innovate within the brief to deliver quality deep retrofits. But the fact remains that they are reliant on the only contractor in their area that has the capacity to deliver. Things have been tough throughout the pandemic for many small businesses and there is an inherent risk to the retrofit programme in Nottingham if this organisation were to cease trading, as there are currently no other suppliers in the local market that could take up the mantle. This highlights the importance of supporting the development of local traders who can support the delivery of retrofit, building diversity into the green economy.

■ **Finance:** Grant funding has been used by many local authorities to get energy transition projects off the ground (such as Nottingham's Energiesprong project, funded by the ERDF). However, this approach to funding often leaves significant gaps after the projects have come to a close, and results in a dispersed network of pilots with no sustainable approach to finance to further energy transition activity in the area. Following Brexit the government has promised to replace EU structural funds with the UK Shared Prosperity Fund. It is not yet clear if the latter will be able to provide the large upfront investment in deep retrofit that is required to get a market and supply chain established in the UK to deliver it.





See [Financing the energy transition](#) for more information.

■ **Scale:** The sizable cost of deep retrofit is linked to its small scale in the UK. Deep retrofit is not commonplace in the UK, so there are not many suppliers with the right skills or capacity to deliver it. Developing the supply chain, investing in those small businesses to design and make products for deep retrofit is a costly process but is expected to pay dividends as the scale of deep retrofit across the UK grows. One way Nottingham has found funding for the upfront costs of deep retrofit is by offsetting the spend against planned maintenance costs for social homes. Deep retrofit is very uncommon in the private rented sector and with owner occupiers, largely due to the current cost. One possible way to draw the private rented sector into deep retrofit is to use landlord licensing powers to require that private rented properties be retrofitted to a higher thermal performance, but further work needs to be done to ensure the burden of cost is not then pushed onto renters in the form of rent increases.

You can see more detail about Nottingham's approach to deep retrofit in Part 4: Deep Dives.

Lewes District Council have begun some exploratory work to uncover the best way for them to decarbonise their housing stock. They recognise that emissions from old homes are high and that there are significant carbon savings to be made on this housing stock. They have ruled out demolishing all their old stock and building new as this wouldn't be possible to achieve within the timescales required to address the climate emergency. Lewes also recognised that 11% of global carbon emissions are created through the manufacture and installation of the materials used to create new buildings.

With the above in mind they have agreed that a programme of retrofit of their existing housing stock is required. This programme will likely include:

-  additional insulation and draught exclusion to reduce heat loss;
-  ventilation improvements to improve air quality and reduce condensation and mould growth;
-  the removal of fossil fuel heating systems and the introduction of more efficient ones;
-  the installation of generation and storage technologies to support supply and energy system management across community of properties rather than just one property.

The current supply chain in Lewes is not sufficient to meet the task of retrofitting an area that has more than a quarter of a million homes, the vast majority of which require some level of intervention. As such, Lewes are working with other authorities in East Sussex and the wider Sussex area to develop a shared approach which has the potential to generate sufficient demand and certainty to allow a healthy local retrofit supply chain to develop. It is anticipated that this would avoid the stop-start nature of past retrofit programmes and create a local industry that is also better equipped to serve the owner-occupier and private-rented markets.

Some local authorities in Sussex have come together to use their collective buying power to intelligently support the development of specialist SMEs in the local area (e.g. [Lewes District Council and Boutique Modern](#), a local supplier of modular new build construction), which in turn provides greater local employment and boosts recirculation of value within the local economy. This approach could be replicated elsewhere in the UK.

Decarbonising local energy infrastructure – district heating networks and district energy schemes

Many local authorities are currently contending with the question of how to adapt their pre-existing energy infrastructure in light of the need to decarbonise energy systems. Locally owned energy infrastructure such as district heating networks (DHNs) and district energy schemes (DESs) have the potential to contribute to the local energy transition of a place, but serious consideration is needed to identify the best approach for each area. While DHNs have been problematic in the UK (with potentially high costs for householders and people having no option to switch to an alternative provider), and have not always delivered on carbon savings, they are currently a part of the UK's energy landscape which must be decarbonised moving forward.¹²

There is significant potential for DHNs and DESs to have a role in supporting the energy transition in the UK in a way that builds community wealth, but practice in this area is still in development and the impact of these schemes on local people and the cost of heating their homes should be considered when relying on such schemes as a local energy solution.

To date, DHNs and DESs have most frequently used fuels such as natural gas, and while hydrogen is being explored as an approach to their decarbonisation there are more immediate and locally focussed solutions which could be used. While DHN operators are required to decarbonise by 2035, the decarbonisation of these schemes will need to be incremental, based on the nature of the infrastructure and local energy assets which could be utilised. This decarbonisation will also ensure that any expansion of these schemes can support the switch to renewable energy more broadly within their locality. Birmingham City Council's DES supplies energy to 12 large public and private sector organisations within Birmingham city centre; its decarbonisation could have a significant impact not only on the Council's emissions, but also those of other organisations within the city.

The decarbonisation of DHNs and DESs should be considered within the context of the locality's wider decarbonisation of heat strategy – factoring in how energy efficiency can reduce overall demand for heat, and other options to meet the remaining heat demand of an area. This might include smaller heat pump solutions or electric heating systems, for example. This is important, as many councils are considering the creation of new infrastructure which may be redundant, or at least be required to generate considerably less heat, with energy efficiency measures in place and an increase in renewables generation or alternative decarbonisation of heat technologies.

The UK Government's Energy White Paper outlined £122m of funding which will support Heat Network Transformation and implement local authority zoning by 2025 – including a commitment to funding the Green Heat Network Fund (a successor to the Heat Networks Investment Project), to deliver additional low-carbon networks.¹³ Local authority zoning powers will enable them to identify areas which can be connected to low-carbon heat networks. This is coupled with updated regulation for DHNs through the Heat Network Metering and Billing Regulations – introducing requirements intended to support a purposeful drive towards the decarbonisation of heat. While these steps are promising in relation to decarbonising existing infrastructure, local authorities addressing existing heat networks must consider how decarbonising infrastructure is going to build community wealth, including in relation to jobs, skills, and supporting wealth to flow through local businesses.

Although District Heat Networks are required to decarbonise by 2035, the pace at which many local authorities want to move is not shared by the private businesses which own the existing infrastructure. Ownership is important when grappling with the quick decarbonisation of these schemes. Where local authorities or other anchor institutions have greater control over the schemes, they can push forward with decarbonisation faster than in circumstances where the networks are owned and managed privately. Birmingham City Council's DES is facing this challenge at the moment, and as their infrastructure is not council-owned they face additional barriers to pushing decarbonisation at the speed they would like. This sits in contrast with Gateshead Council, who are currently pursuing a switch from 4MW of gas combined heat and power, to a 6MW mine-water heat pump and town centre solar farms, in large part as a result of their ability to take on new opportunities quickly thanks to the municipality's ownership of their DES.

Decarbonised DHNs and DESs are already well established in Europe. Mijwater B.V in the Netherlands, a social enterprise borne out of a municipal project in Heerlen, has a fully networked geothermal and minewater based DES, supplying 50,000m² of floor space with heat and hot water.¹⁴ Decarbonising these schemes in the UK could have a significant impact on efforts to progress the energy transition – but should include energy justice considerations if they are advanced and connected to residential properties.

How councils can use community wealth building to support the decarbonisation of local energy infrastructure



SOCIALLY PRODUCTIVE USE OF LAND AND PROPERTY

Local authorities have the advantage of an intimate knowledge of the assets of their locality and can develop solutions which make the most of their unique geographic and economic characteristics.

Gateshead Council is using local energy assets in the form of mine water under the town centre to install a 6MW mine-water heat pump and connect it to their DES, as well as using council land to develop a movable ground-mounted solar array in the town centre. They are also exploring the option to buy or lease land from private landowners that are stakeholders with shared aims (e.g utility companies such as Northumbrian Water), on other heat networks in the Borough, to facilitate their construction where Council land holdings don't exist. Birmingham City Council are exploring the potential to link their DES to a waste-to-energy plant at Tyseley Energy Park, a significant economic and environmental asset in the east of Birmingham.



MAKING FINANCIAL POWER WORK FOR PLACES

Councils are in a good position to lever in funding to support the decarbonisation of local energy infrastructure. In the case of district heating, there is significant government funding available to support the development of these schemes, such as the [Green Heat Network Fund](#).

Councils should seek to ensure this funding has as much benefit for the local area as possible while supporting decarbonisation.

Consideration should also be given to how such changes will be financed, the broader financing of the scheme, and how the scheme would affect local energy consumers both in terms of cost and in terms of choice.

See [Financing the energy transition](#) for more information on how councils can lever finance in a way that builds community wealth.



DEMOCRATISING THE LOCAL ECONOMY

Council-developed, managed and owned infrastructure is another alternative form of ownership within the energy sector. This municipalisation of a key utility also means it is more democratically accountable, and the council is more able to act at pace without navigating intermediate stages to push forward decarbonisation and build a wider network of local energy infrastructure.



FAIR EMPLOYMENT AND JUST LABOUR MARKETS

The decarbonisation of local energy infrastructure has the potential to support larger goals of building local jobs, skills and supply chains. There is huge potential to build skills and create employment opportunities, for example within the sphere of the installation and maintenance of heat pumps – the UK will require over 44,000 installers alone by 2035.¹⁵

While the development of new DHNs and DESs should be approached with careful consideration as to their role in tackling local inequalities, we know many councils have already committed to the development of such networks to support their efforts around energy transition. Where this is the case, civil works, road works or other construction-based tasks (such as welding) can generally be provided by local suppliers. If a council is already committed to developing multiple DESs over a set time (e.g 5/6 schemes over 5/10 years), local suppliers can be drawn to the table thanks to a clear sense of the pipeline for investment, time involved and opportunity to invest in skills - supporting the development of local supply chains.



PROGRESSIVE PROCUREMENT OF GOODS AND SERVICES

Councils can play a key role as the anchor customer for these schemes, acting as the viable core to the project's financial model. From this point, additional customers can be added (such as other local anchor institutions), using their procurement to support the scheme's evolution.

As schemes develop (if delivered in-house), officers build experience, understanding of the local market, and capacity to go directly to local subcontractors to request services. This helps grow understanding of how to break down the supply chain to enable local businesses to provide the services needed to develop the DES.

Social value can be levered from these schemes through the development of apprenticeship opportunities, skills development and local subcontracting aligned with the "fair employment and just labour markets" pillar of community wealth building.

Enablers and barriers to councils using this approach to decarbonise local energy infrastructure - Gateshead Council and Birmingham City Council

Gateshead Council and Birmingham City Council have both established and built district energy schemes within their town and city centres, and both are contending with the challenge of decarbonising these schemes.

ENABLERS

▶ Political buy-in

Gateshead Council's Leader had visited the Netherlands previously on a European exchange project and had stated their intention to ensure Gateshead "caught up" with Europe in establishing a DES. This high level buy-in was key to getting the project moving. Decarbonising the scheme has also been enabled by political buy-in, with Gateshead's ambition to reach zero carbon by 2030 reflected by the company managing the DES, which has signed up to achieve zero carbon by 2030. This has acted as the policy driver which has enabled Gateshead to push forward the decarbonisation of the district energy scheme as a priority.

▶ In-house capacity

Gateshead Council have a team of 10 people which manage assets like the DES enabling them to keep elements like design, build, operation and maintenance contracts in-house and removing the need to outsource. This also creates the capacity and expertise needed to reshape and decarbonise the scheme.

▶ Local assets and organisations

Both Gateshead and Birmingham have benefitted from their understanding of the potential of local assets and organisations. The evolution and decarbonisation of Gateshead's DES has been enabled by their ability to utilise local assets (such as buildings as heat customers, land holdings over mine-workings and vacant brownfield sites), and visualise the potential of new projects in connection to different localities with different assets. Birmingham's DES has been successful to

date because of its connection to large local institutions. These connections are crucial in establishing and developing a DES, and another opportunity to build community wealth as a by-product of creating a localised energy system.

■ Private ownership vs municipal ownership

Birmingham has faced a key challenge when seeking to decarbonise their DES, as an external provider owns and maintains the infrastructure, and there is currently no regulation requiring DESs to decarbonise. As such, Birmingham are having to assess their options with regards for how they go ahead with the DES, as they are currently in a contract for the provision of the scheme until 2032 without sufficient emissions savings. In contrast, Gateshead's approach to ownership (retaining as much as possible within the Council's control) has allowed them to decarbonise at pace, and invest in new infrastructure locally with the potential to further expand the DES. When considering how to decarbonise pre-existing infrastructure, ownership matters.

■ Finance

Both schemes had to contend with challenges around finance. To this point, there are few clear examples within the UK of how local finance has been solely used to support the decarbonisation of district energy schemes, however both Birmingham and Gateshead Council have shown the potential of councils as a conduit for funding to support the development of municipally-owned energy infrastructure. See [Financing the energy transition](#) for more information.

For more detail on the approach in Birmingham see Part 4: Deep Dives.

“Every step you give away [...] you’ll give away profit margin that a private company is going to take, and it erodes the benefit that’s left for the community and the Council.” – Gateshead Council officer



Gateshead’s District DES became fully operational in 2018. The DES was financed and built by the council, but is operated by a Special Purpose Vehicle (SPV) which has a 40 years concession contract with the Council, and takes on all the commercial risk while paying the Council a fee for the use of their assets. The SPV is a shell company without staff, but with a board of directors made up of Council Directors. Councillors do not sit on the board as it was decided that they should not be politically exposed to the commercial risk of the project, but the scheme does have a members panel which acts in an advisory capacity for the scheme. The SPV buys services from other local partners, and buys Council staff time so the company does not have to worry about the conditions the company would need to fulfil as an employer. This arrangement was made as the Council made a conscious choice to keep the DES under municipal control, to retain the maximum benefit for the community and the Council.

The project’s original brief was to decarbonise heat in the town centre, but it developed into a scheme for regeneration and creating surplus income from the Council. The Energy Centre was built on council land within the business quarter, and since the DES’s creation it has supported the regeneration of the business quarter as there is easy-to-connect-to infrastructure which allows developers to “build low carbon” in Gateshead, without paying a premium. In parallel with the Council’s commitment to reaching zero carbon, the company has signed up to achieve zero carbon by 2030. Originally the scheme supplied 4MW of gas combined heat and power, but the council is now building a 6MW mine-water heat pump and seeking to further develop 4MW of ground-mounted solar farms in the town centre on council-owned brownfield sites. They expect this, alongside other

energy generators such as a small energy and waste plant, to enable them to reach 35-40% of what’s needed to reach zero carbon by 2025.

With time, the Council has developed the experience to go directly to subcontractors which can deliver the services they need (for example pipe installation). To build community wealth, they are breaking down supply chains into their constituent parts, creating greater opportunities for local and regional suppliers to bid competitively, rather than relying on large nationals to deliver a bundle of services.

GATESHEAD’S TOP TIPS:

-  In terms of selling energy and heat, be the anchor customer where possible, or find a good and reliable anchor customer, then grow from that viable core.
-  No DES will be completed as envisioned at the start, council officers always need to have something in their back pocket to pull out when they face financial, legal or commercial barriers. For Gateshead, two examples of this were thinking outside the box to secure more diverse revenue streams through using a private wire to sell electricity as well as heat, and making the most of the grid services National Grid will pay for (which are now an important revenue stream for the company).

Emerging practice tackling the challenge of scaling and financing energy transition

This section will explore solutions to two of the key challenges which emerged within the deep dive case studies carried out in Oldham, Nottingham and Birmingham: scaling and financing the energy transition. Solutions to these challenges are still emerging, and new practices are being developed all the time – this is a snapshot of practice in the UK which can be explored to deepen local community wealth building approaches to the energy transition.

Scaling up the energy transition

The scale of the energy transition is huge and will require billions of pounds of investment. To meet the 2035 requirement for as many homes as possible to achieve an EPC rating of C alone, we will need to see up to £65bn of investment in energy efficiency upgrades.¹⁶ A significant amount of funding, this can also be seen as part of a wider green stimulus to help support job creation and training at a time of economic recovery.

Councils face significant challenges when considering how to scale up the energy transition within their areas, and will need to draw on everything they have to shape cross-organisational, place-based approaches to the energy transition which also build community wealth. This will include building partnerships and cultivating work across anchor networks to develop joined up approaches to the energy transition, co-ordinating across the public, private and community sectors, and utilising any additional levers at their disposal (such as influencing through procurement and co-ordinating across anchor networks).



SOLUTION 1



Coordinating across the public, private and community sectors

To achieve an energy transition which builds community wealth, and can be realised at scale, we will need cross-sector partnerships and collaboration between local anchor institutions, the VCSE sector and local communities and groups active in the climate space.

Developing partnerships based on a locality's strengths will be crucial in scaling a community wealth building approach to the energy transition. Councils will need to understand the strengths of their local anchor institutions (and their work around the energy transition), the ecosystem of activism and grassroots work which could support the energy transition, and the nature of their local supply chains to deliver the interventions needed to deliver the energy transition.



Using a place's strengths: Birmingham's landscape of partnerships

Birmingham City Council (BCC) is a single anchor within a city which has a rich ecosystem of knowledge and practice which will enable them to scale the energy transition. BCC is currently undertaking a significant programme of work and is making the most of the assets and expertise which sit within the city in order to draw the most value from its projects.

BCC's decarbonisation of heat project (BEIS-funded) is heavily linked to Tyseley Energy Park (TEP) in East Birmingham, and is exploring the potential to connect zero carbon technologies to housing in the local area using the technical expertise held at TEP. BCC is not the only anchor building upon this resource. University of Birmingham's Birmingham Energy Institute is working closely with TEP to build the Birmingham Energy Centre,¹⁷ and develop the Birmingham Energy Incubation Hub.¹⁸ A core principle of this work is to scale up the energy system solutions developed by the University of Birmingham and TEP to benefit the surrounding communities in East Birmingham.

East Birmingham is being treated as the geographical hub of Birmingham's energy transition (particularly for retrofit and heat decarbonisation). This has been recognised more broadly by politically active individuals, and the East Birmingham Community Heat Taskforce has been established in the area (initiated by a Councillor and local MP), and is advocating for greater connection between the city's communities and BCC's plans and projects around decarbonisation.¹⁹ This group has been brought into the East Birmingham Inclusive Growth Strategy's programme of work with the ambition to develop a community heat pilot in the area. This proposes to develop projects which decarbonise heat while also meeting the East Birmingham Inclusive Growth Strategy's goals of creating good jobs for local people. Community wealth building is a central component of the East Birmingham Inclusive Growth Strategy work, and the areas economy also has the potential to be shaped by the Birmingham Anchor Network.

This coalescing of projects and ideas in Birmingham has created fertile ground for the expansion of approaches to the energy transition, initiated across anchors and informed and shaped by groups with roots in the local community.



Growing grassroots energy solutions: Oldham Energy Futures

If we hope to grow energy democracy, with shifts towards greater civic, community and municipal control of energy infrastructure and companies, citizen involvement in shaping those systems will be critical. Allowing self-generation of energy and increased civic participation in energy governance underpin the idea that all citizens are stakeholders within these systems, and have an interest in energy system outcomes. Greater citizen involvement will help to catalyze the other changes needed to build new energy systems which work for people, place and planet.²⁰

Oldham Council has recognised the potential to build greater support for a local energy transition through the use of Local Energy Action Planning (LEAP). The LEAP approach focuses on mobilising local communities to develop plans for the energy transition in their local area, acting as a participatory vehicle for local residents to shape and take ownership of the local energy transition.

Oldham Council are partnering with Carbon Co-op, Urbed and CLES to pilot the LEAP approach in two neighbourhoods within the Borough. The aim is to develop three pilot projects driven by the “neighbourhood energy community groups” made up of local residents. This approach aims to empower local people in Oldham to shape the energy system they want, model how a new local energy system can provide economic, environmental and social benefit to the town, and lock in community ownership of new energy infrastructure, policy and practice.

SOLUTION 2

Utilising additional levers – procurement and anchor networks

Beyond clear partnerships between groups on projects and local initiatives, there are other ways to scale approaches to the energy transition which focus on broadening the scope of council influence. Councils need to consider the ways in which they can use their mechanisms and relationships to build a coordinated and collaborative approach to the energy transition. Two community wealth building mechanisms for broadening council impact around the energy transition are the use of social value requirements in procurement and the co-ordination of, and collaboration within, anchor networks.



Social value and procurement: Manchester City Council Highways Team's 10% 'environment' weighting

Social value is a key tool within the community wealth building toolkit, and councils should consider how they can use their social value requirements to get more from suppliers to deliver the energy transition. Social value in relation to climate and the energy transition is something councils are currently ironing out, with interesting work occurring in Devon and Bristol. While there are no current complete examples of the use of social value to address the energy transition directly, Manchester City Council (MCC) are experimenting with the use of social value to prompt and challenge suppliers to take measures to decarbonise when taking on council contracts.

MCC have a strong track record of using social value to inform their procurement processes, having introduced a 20% social value weighting in 2015. In response to their declaration of a climate emergency in July 2019, the Council trialled the use of a 10% environment weighting alongside the pre-existing 20% social value weighting in two highways contracts: Chorlton 1A and Hyde Road. MCC are using this weighting to demonstrate their commitment to making changes to tackle climate change, and their expectation of suppliers to do the same.

Several companies responding to the tenders showed a clear commitment to making a difference around climate, and also within Manchester. With the introduction of this 10% environment weighting, suppliers accepted that after Manchester's past 12 years emphasising social value, they would need to focus on environment and climate to win Council contracts.

The impact on the two projects varied due to the nature of each contract, but MCC saw a significant return on their environmental requirements from the main contractor on the Hyde Road project (Eric Wright), who are producing an unsolicited carbon report to demonstrate how they reduced carbon emissions throughout the project. The carbon reduction work carried out as part of this project included the use of more climate-friendly materials, and innovation on the part of the supplier to source materials and labour locally.



Anchor networks and big-picture thinking: Birmingham Anchor Network's potential in relation to the energy transition

Anchor networks are being adopted across the UK as a vehicle to bring together a locality's key anchor institutions to coordinate broader community wealth building approaches and scale up impact. As councils have a limited sphere of influence, this can be dramatically increased by collaborating across anchor institutions such as the NHS, housing associations, local colleges and universities, and the voluntary, community and social enterprise (VCSE) sector. Combining forces across these local organisations also provides opportunities for joint commissioning, the sharing of good practice around the energy transition, and support for local businesses to develop and expand through secure income from public sector procurement.

CLES has coordinated Birmingham Anchor Network since March 2019, with a core membership of seven organisations: Birmingham City Council, the West Midlands Police and Crime Commissioner, Queen Elizabeth Hospital Birmingham, University of Birmingham, Aston University, Bourneville Village Trust and Pioneer Housing Group. These anchors have been undertaking their own individual approaches to the energy transition, but were invited to come together to give their perspective on how anchors could contribute towards a community wealth building approach to the energy transition in Birmingham.

All anchors showed an appetite to use their land and property to support community renewables projects. A key suggestion which could scale up the approach to energy transition in the city, was that each anchor should evaluate its land and property assets to identify its potential to enable the energy transition (such as energy generation, retrofit of property, or providing office space for SMEs delivering energy transition interventions). The anchors would then bring this information back together to develop a shared picture of the land and assets available, and this could be used to demonstrate demand to the local market around things such as retrofit, or to connect community groups seeking to develop community renewables with anchors which would be interested. In a city like Birmingham, with significant land values, this is particularly relevant if considering the potential of land which isn't suitable for development. Two anchors identified such land near the new HS2 line in east Birmingham which could be used for community renewables, one of the suggested energy transition interventions.

Financing the energy transition

Financing the energy transition at the local level is going to be one of the key challenges local authorities face in coming years. After ten years of austerity and cuts to council funding, meeting the costs of the energy transition is going to be a challenge without significant government intervention. The removal of the Feed in Tariff Scheme has meant that renewables projects are having to seriously rethink their business models; we need access to finance to retrofit 19 million homes without pushing the cost onto those already struggling; alongside finance for the capital costs of the infrastructure needed to support the switch from fuels such as natural gas to clean heat and power.

The question of who bears the financial burden of the energy transition, and who benefits, is central to what a community wealth building approach to the energy transition seeks to do. As councils continue to see cuts to their funding, and national government not doing enough to fund the energy transition, we are going to need to be creative to fund the energy transition in a way that benefits all who live in our localities.

What is available?

Councils will need to consider what the best form of finance is to suit their approach to the energy transition. Grant funding has been used by many local authorities to get energy transition projects off the ground (such as Nottingham's Energiesprong project, funded by the ERDF), but with Brexit there is an opportunity to explore how the Levelling Up fund or the UK Shared Prosperity Fund could be used to support this work. In addition to leveraging in funding, some local authorities offer grants to support others to complete energy transition work (such as Portsmouth City Council's provision of loans for home repairs and improvements).

However, frequently this approach to funding leaves significant gaps after the projects have come to a close and funding streams end. Grant funding is still a valuable income stream for initiatives such as deep retrofit, as they are currently not cost neutral, but where grant funding is used or distributed, councils should consider how this funding can develop foundations for longer term sustainable income.

It is important to note that not all funding must be generated by councils – one of the significant advantages of working closely with community-owned projects (such as community renewables) is that they can access funding which could not otherwise be accessed. To successfully drive the energy transition in our local places, we need a patchwork of funding to build a comprehensive approach to scaling the energy transition.

We are seeing the emergence of new ways of harnessing and creating sustainable finance for the energy transition by councils across the country. Councils have access to different forms of finance, and are already using direct council investment, community-municipal bonds and Public Works Loan Board borrowing to get energy transition initiatives off the ground. There is also the potential to generate income for local authorities in the long term from energy transition projects, and to use any surplus to push forward interventions around fuel poverty.



SOLUTION 1

Short-term project finance

While we know that longer term, more significant finance is needed, there are ways councils can attract and channel finance in the short term which will support their ambitions around the energy transition and building community wealth.



Direct investment: Oldham Council and Oldham Community Power

Councils have significant financial power, and are able to act as a 'friendly lender', reducing transaction costs and providing comparatively good interest rates that wouldn't be available through a commercial lender.

Oldham Council opted to provide Oldham Community Power with a £250k loan to top up the investment they raised when their first community share offer did not raise the funds needed.

This bridging loan was critical in enabling the scheme to move forward, helping the scheme to meet the deadline for more generous Feed in Tariff payments, and demonstrating commitment and trust to the organisation. This bridging loan prompted greater community trust in the project (which had previously been lacking as many residents were sceptical of the project, with some reporting it to the police believing it to be a scam), and led to greater uptake in the later share offer used to pay back the bridging loan.

Oldham Community Power paid back £150k to Oldham Council and it was decided that the council would retain the remaining sum it invested as shares. As such, the council has a stake in the organisation and contributes to its governance as a shareholder.



Public Works Loan Board borrowing (PWLB): Portsmouth City Council's energy services team

While national government has introduced more stringent terms on which PWLB borrowing can be used, there is still scope to use this form of borrowing for local investment with a clear policy purpose: for example, the energy transition. This form of finance is inaccessible to other anchors, community groups and the private sector, and should be considered as a lever to bringing in money to fund some elements of local energy transition, including the creation of green infrastructure.

Portsmouth City Council's energy services team has developed a model of finance which enables them to use PWLB borrowing to install technology on Council-owned properties. Having developed a well resourced team from these activities, they now even provide their services to other local authorities in the area. The team is partly funded by the fees they earn through delivering capital investments in a portfolio of energy transition initiatives, including solar PV, combined heat and power, battery storage and LED lighting. They invest in spaces that they own (such as schools, swimming pools, and Portsmouth International Port), and as they have an in-house team to deliver the services needed, the Council is able to turn capital expenditure into fees to partially fund the energy services team (a team with 18 members of staff), which is responsible for all of the energy functions across the Council; whilst still creating savings and income which helps to sustain frontline services related to fuel poverty mitigation. They have found that the installation of solar PV projects works particularly well for them using this model, and the Council have a strong understanding of the way in which they can use their property portfolio to allow for such investments to be made.

In contrast to their previous investments in commercial property (something many councils have done in recent years using PWLB borrowing), their investments in green technology can often have a return on investment of more than double the amount of return expected from commercial properties. They also have the potential to deliver local green infrastructure, benefitting both local communities and councils.



Community-municipal bonds and crowdfunding: Swindon Borough Council and Abundance Finance

With increasing limitations on council borrowing powers, alternative forms of borrowing are being explored, and have the potential to enable local energy transition while also delivering a return on investment to local investors. Community-municipal bonds have been developed as a solution to the challenge of raising capital investment.

Using Abundance Finance's platform and approach to crowdfunding, Swindon Borough Council raised £4.3m of project finance using community-municipal investment for two companies owned by Swindon Borough Council which each developed a 5MW solar park. Their scheme attracted 1200 investors, with a low threshold for investment (2% of investors invested £5), and built local understanding of the council's low carbon and financial strategy. Investors benefit from a predicted return of 6% over 20 years, pushing profit generated by the solar farms back into the pockets of investors (of which 35% came from Swindon or the surrounding area). Since this initial project, Abundance Finance have developed a model of finance, Community Municipal Investment, to enable councils to use a form of crowdfunding to raise money for public infrastructure, including green initiatives.

This approach has also been taken by Leeds City Council, Warrington Borough Council and West Berkshire Council, and many are now exploring it as a possibility to finance local energy projects.

Their [local authority guide](#) should be a reference point for councils that are interested in exploring different forms of finance which could return profits to the pockets of local people, building community wealth and offering a local source of finance for capital projects which have social and environmental benefits.

SOLUTION 2

Creating longer term finance for the energy transition

At the local level, community green banking initiatives offer one solution to financing the energy transition.²¹ There is also space to use energy transition initiatives themselves to generate finance for use in local services, and to fund additional energy transition work. This is particularly helpful in considering how the costs of the energy transition are distributed and in preventing the hardest hit from being financially burdened as a result of energy transition initiatives (such as retrofit).



Profits for council use: Gateshead district energy scheme

Gateshead Council anticipates the long-term generation of surplus income from their district energy scheme of around £75m over a 40 year period alongside social and environmental outcomes. This surplus is not currently ringfenced and is already generating income for the Council: helping to finance the scheme, contributing to further income targets, and plugging the budget gap from funding cuts to councils. In future, surplus income could be reinvested into public services, maintaining services in the face of any future cuts, and could easily be used to fund further zero-carbon energy solutions and services to support the council to deepen their approach to the energy transition locally.

Gateshead Council's District Energy Scheme began operating fully in 2018, made possible through direct funding from Gateshead Council and the lease of the power network to a special purpose vehicle (SPV) which runs and maintains the network. Gateshead's financial model was developed without access to subsidies, which resulted in the generation of both heat and power so they could sell energy at close to retail prices. The use of private wire networks as well as heat was crucial in making the scheme viable.

The installation of a 6MW mine-water heat pump has been made viable as the scheme reached the final round of the renewable heat incentive (to be paid 5.5p/unit of heat generated, which will support the repayment of the capital costs of the scheme) and access to £5.9 million of heat network investment funding from central government (the Heat Network Investment Programme). In the early years of the programme the Council only expects the scheme to make enough to cover its finance costs, but in the longer-term (10 years), Gateshead Council expect to see surplus generated as dividends from the SPV which they will be able to direct however needed (as finance is not ringfenced). The mine-water scheme and associated customer connections alone are expected to generate almost half (around £30m) of the total surplus income forecast over the next 40 years.



Redirecting profits to support community work and fuel poverty initiatives: Ernesettle Community Solar and Plymouth Energy Community

Plymouth City Council (PCC) have used the Ernesettle Solar development as a way to create financial sustainability for local community groups, removing the usual reliance such groups have on short-term grant funding. PCC transferred the land used to develop the Ernesettle Solar array to Four Greens Community Trust (FGCT) to use as a commercial asset. When Plymouth Energy Community (PEC) developed the solar array on the site, FGCT were then able to generate funding as a result of charging PEC a ground rent of £18,000+ (with increases index linked following the first year). PEC was then able to generate income from energy sales from the solar array.

PEC invest their surplus into work focussing on addressing fuel poverty, such as providing free advice to help keep residents warm, and reduce both their energy bills and their carbon footprint. A day of one of their advisors' work makes residents £602 better off, and the team deliver a series of programmes to a wide range of people in the city and surrounding area:

- Warm and Well tackles fuel poverty for those living with a disability;
- The Local Energy Advice Partnership supports people in their homes with advice and free energy saving measures;
- The Warm Homes Fund delivers early intervention support packages around poor housing and fuel poverty; and
- Southwest Vulnerable Customer Affordable Warmth Campaign brings advice and support to fuel poor and vulnerable households throughout Devon and Cornwall.

This use of surplus contributes to removing some of the financial burden from those most affected by fuel poverty through the provision of services, and also opens options to invest in other energy transition interventions. This work has also enabled PEC to identify need in the local area. With energy advisors having observed the impact of poorly built housing resulting in energy inefficiency, they are now working with PCC to deliver 37 units of affordable carbon zero housing, ensuring it is both affordable to buy or rent, and to run (Whole Life Costing - a factor often overlooked by commercial housing developers).

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- Part 1: Why community wealth building?
- Part 2: Getting started
- Part 3: Current and emerging practice
- Part 4: Deep dives - Oldham, Nottingham, Birmingham

Centre for Local Economic Strategies (CLES)

Established in 1986, CLES is the national organisation for local economies - developing progressive economics for people, planet and place. We work by thinking and doing, to achieve social justice and effective public services.

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