HOUSE OF COMMONS

Environmental Audit Committee

Oral evidence: Technological innovations and Climate Change: Community Energy, HC 1208

Wednesday 14 April 2021

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Watch the meeting

Members present: Philip Dunne (Chair); Duncan Baker; Dan Carden; Barry Gardiner; Mr Robert Goodwill; Helen Hayes; Ian Levy; Caroline Lucas; Cherilyn Mackrory; Jerome Mayhew; John McNally; Dr Matthew Offord.

Questions 1-58

Witnesses

I: Anda Baumerte, Sustainability Manager, Northern Powergrid, Patrick Erwin, Policy and Markets Director, Northern Powergrid, and Alastair Mumford, Corporate Energy Manager, Devon County Council.

II: Kayla Ente, Founder and CEO of Brighton & Hove Energy Services Co-op (BHESCo), Paul Hallas, Director, Sustainable Energy 24 (SE24), and Dan McCallum, Co-founder and Manager, Awel Aman Tawe.

Written evidence from witnesses:

- Northern Powergrid
- Devon County Council
- Brighton & Hove Energy Services Co-op (BHESCo)
- Sustainable Energy 24 (SE24)
- Awel Aman Tawe

Examination of witnesses

Witnesses: Anda Baumerte, Patrick Erwin and Alastair Mumford.

Q1 **Chair:** Good afternoon and welcome to the Environmental Audit Committee. Our session today is the latest in a series looking at technological opportunities to address climate change. In this session, we are focusing on community energy schemes in all their various guises, and the extent to which the public can engage in stimulating changes in behaviour across the energy space.

We have two panels today. We start with a panel from local authorities and grid operators. I first welcome Alastair Mumford from Devon County Council. Hello, Alastair. Can you tell us what your role is at the council?

Alastair Mumford: Hello. I am Alastair Mumford, corporate energy manager at Devon County Council. I am also the regional programme manager for the South West Energy Partnership, which is a partnership between Bristol City Council, Plymouth City Council and Devon County Council, using European local energy assistance money for the programme.

I declare an interest as I am an appointed director for Exeter Community Energy, and a shareholder.

Chair: Thank you. We are joined by two representatives from Northern Powergrid.

Patrick Erwin: Good afternoon. My name is Patrick Erwin and I am policy and markets director at Northern Powergrid. I have a fairly broad portfolio, but in the context of this session, I am thinking very hard about what the future of the energy system looks like and how my organisation plays into that.

Anda Baumerte: Good afternoon. My name is Anda Baumerte and I work in the policy development team in Patrick's department. My main focus is on external stakeholder engagement in a range of decarbonisation topics. I am the lead for community energy for Northern Powergrid.

Q2 **Chair:** Thank you very much. I also declare an interest in a community energy scheme in my constituency. I am a member of the Ludlow Hydro Co-operative, which has a hydro scheme on the River Teme in Ludlow. I am pleased to say it is working despite having had a significant flood incident last year, which required the replacement of quite a lot of the motor.

Patrick, will you give an overview of the role that you think community energy has to play in reaching the UK's net zero commitment? We have received evidence from a large number and a wide range of different kinds of schemes, from energy generation through advice services, to individuals and all sorts of relatively small and some larger scale schemes. Could you set the context for us of how much this is going to

help us get to net zero?

Patrick Erwin: When we look at this, we see two big changes going on in the energy system. First, there is the very strong drive to decarbonise and get to net zero. Secondly, there are the opportunities that data digitalisation and things like cheap computing can do to digitise and make the energy system more efficient. Associated with those changes, there are going to be lots of opportunities, as well as some costs.

We think that community energy has a really important role to play to make sure that the benefits that accrue from those transitions are felt by people at the end of the system, not only people in the middle of the system. It is a really important way of engaging local communities and ensuring that everyone in society, particularly the most vulnerable, are able to benefit from the energy transition.

Q3 **Chair:** In terms of the proportion of the energy market that is contributed at present by such schemes and that you could envisage it getting to, are you able to indicate an order of magnitude?

Patrick Erwin: It is very hard to think about order of magnitude. The most efficient configuration we see is where we maximise the amount of energy balancing that happens on the edge of a grid and locally. Looking at a 2050 world, we think that system in many places the local energy might be self-reliant much of the time—not all the time but much of the time—so we think it could be significant but not dominant.

Q4 **Chair:** Does this extend as far as individuals using their electric vehicles to contribute to local use as well as low and zero emission driving?

Patrick Erwin: Very much so. As a network operator, when we look at an electric vehicle, for example, we see a 40 or 100 kWh battery on wheels that spends 95% of its time stationary. We would like that battery to be available to the system when it is not moving. We want our existing customers to monetize the value of that battery. Also, if we are using those batteries, which spend 5% of their time moving around and 95% of their time supporting the grid, that has a big sustainability angle because we do not need to build them.

Q5 **Chair:** Anda, given your role in engaging the public, do you see community energy projects as a way to capture the imagination of the public to get behind different forms of generation and energy saving?

Anda Baumerte: The most common or dominant motivation behind local community-led projects and groups that are emerging is decarbonisation. That is based on what community groups have told us in the regions. There is real and growing momentum and a lot of ambition at the local, grassroots community level to achieve net zero for their own communities, to do their fair share and to achieve that target early. Tapping into that sentiment and ambition would help to address the more difficult elements needed to reach the net zero target, such as behaviour change, awareness raising, individual action—undoubtably needed if we are to reach net zero—and individual accountability for one's own carbon footprint.

Q6 **Chair:** Alastair, could you give us your view on the role that community schemes can play in the wider acceptance by the public of the need for behavioural change?

Alastair Mumford: In some ways, there are two different areas. One is a supportive function. Community energy organisations are bringing it down to a granular level, a local level, as is obvious. In the supportive function, it takes those national debates down on to the streets. You are getting people to have conversations on their doorstep about how to make their homes net zero carbon.

Also, there is a translation-type function—taking ethereal ideas like decentralised energy or smart energy networks down to a pub conversation level. I don't think I have ever had a conversation in the pub about smart grids, but I definitely have about smart meters.

Those are two critical things, because we need to get everyone having those conversations. It is important to the redirecting of money from leveraging people to invest, so you are getting that local money from the net zero activities, but also then giving back. A key part and defining aspect of community energy groups are community funds. That can go to fuel poverty and environment projects, or anything that the community energy organisation can bring. Community energy organisations are a trusted partner—they add value to any initiative. For a local authority trying to do something, it is important to work with them.

Q7 **Chair:** We will come on to the individual schemes each of you is involved in. Before we do, taking that thought further—does your role at the council mean that you are trying to stimulate council projects to work alongside local community groups? Are you acting as a sort of broker between initiatives and projects in your county?

Alastair Mumford: Yes, I and colleagues—other officers—are doing that. We support community energy organisations in a number of ways.

We have secured external funding, whether that is European funding or Government funding, to support the growth of community groups, and to provide specific interventions such as legal documents—heads of terms for power purchase agreements, example documents that they can use. We also help in terms of technical support, such as training in aspects of retrofit or helping them to network with the commercial supply chain—bringing the social sector and the private sector together.

We are also trying to get them involved with contracts. We have four community energy organisations in Devon that are carrying out a resident liaison officer role for our Green Homes grant local authority delivery projects. It is much like a retrofit co-ordinator role under PAS 2035, but they are critical because they are on the ground, they know the houses and the people there, and they are seen as independent, so they provide that important support function.

We are also trying to develop new things with community energy organisations. We are looking to trial the Carbon Co-op People Powered

Retrofit initiative in Devon. Again, that will be with community energy organisations.

We are also looking to try to develop a synthetic power purchase agreement. At the moment, it is very much in the early stages, but the synthetic power purchase agreement for local authorities is great because, from a regulatory point of view, we do not need to procure somebody, so we can be assured that we can get local community-owned renewables.

Q8 **Chair:** I don't want you to go on too much about your projects, because others will ask you about that. Patrick, if we could just go back to the reference to digitisation and how introducing smart grids will make a difference, could you describe what impact community energy schemes can have? This is a facilitator, presumably, to help them make their local contribution count.

Patrick Erwin: It is. At the simplest level, the way we have traditionally run the energy network is that we have built the network to meet peak demand, but we actually only see peak demand for a few hours each year. That means that there is a lot of latent capacity in the energy network, which you can access if you can reliably flex or suppress peak demand; that is the ability to optimise between supply and demand within the constraints of the network. It is a way of getting a lot more utility out of existing infrastructure.

That is really difficult in a world without computers and digitisation, but in a world with lots of cheap sensors, cloud computing and machine learning, it becomes a relatively simple thing to do. We see that optimisation starting very locally—in your house, behind the meter. The next tier is optimising locally, then regionally, then nationally, and we think that community energy schemes are one of the places that you can do that optimisation.

To make that real: if you are on a street and someone has a big south-facing roof, and someone on the other side of the street has a couple of electric vehicles, then if we can use computers to optimise the charging of those electric vehicles so that it is done by the big solar roof across the street, we don't ever need to put that power through a transformer. It is then all happening on the local low-voltage network. Minimising that net power flow maximises the value capture locally, but also minimises the resistive and hysteresis losses of it going through the system. We see all of that being managed through, essentially, smart grid technology.

Q9 **Chair:** It sounds somewhat utopian, and incredibly difficult to achieve in practice. Anda, perhaps you might give up some help around the barriers that currently exist which prevent that from happening?

I can think of one: if you were looking to invest capital in a scheme funded by a local community, in the past, generally speaking, what you needed was a contract that would assure you a price in order to generate your electricity. If the pricing is going to be variable and unpredictable through the smart grid, doesn't that make it rather difficult to put in place the financing structures that will encourage the development of initiatives

in the first place?

Anda Baumerte: First, I want to echo Alastair's and Patrick's views that community energy groups and stakeholders are key to making sure that the energy transition is beneficial for everyone and everything in terms of that local outreach. When it comes to barriers, there are several community energy groups, particularly in our region, that have been telling us about this. Looking at the list of issues that they are facing and the uncertainties there are, they are really closely linked and cannot be looked at separately, so there needs to be a holistic approach looking at the barriers facing community energy. You mentioned complexity and uncertainty, and that is definitely one of them. The key feedback we have been getting from community energy groups is that they are quite frustrated that the social and environmental values are not being captured fully in the energy system, which proves a barrier for making the case for the economic viability of a project. It also poses a barrier when the value of greenhouse gas or carbon abatement is not captured fully or not communicated consistently across fuels and technologies, and the social and environmental levies are levied on electricity, which is a fuel they would utilise.

We have heard a lot of local ambition from groups looking at their own community and carbon footprint and really wanting to set up local supply and peer-to-peer trading projects, like Patrick outlined, but there are currently a number of regulatory barriers to making those viable and a reality. So there is still some journey to create that Utopia, as you put it, but we think that it is quite realistic and that those actions would benefit local communities in more ways than one.

Chair: Thank you very much. Alastair?

Alastair Mumford: Specifically on that point, Chair, you mentioned the fluctuation in price and how community energy organisations can deal with that. From a generator point of view, you would have a wholesale price that would be set for a year or however long, so you would not see any variation in that, but on the retail price for a consumer, yes, you would see those fluctuations, but it will be automated so you would have some service through the licensed supplier—an app on your phone or something—that would do those transitions for you, and then a few geeks would be sitting there, playing around with all the devices on an hour-by-hour basis. But I reiterate what Anda is saying. For me to be able to sell any electricity to my next-door neighbour or whatever, we cannot really do that at the moment, because the regulatory barriers are there. It would be really great to see some movement there, because to get those local energy markets we do need to see some changes.

Patrick Erwin: I would reinforce what Alastair said. Technically, we think that what we have described is pretty doable. Actually, all those technologies already exist. There is a bit of integration to do, but it is not a big challenge. The bigger challenges are regulatory and commercial.

We should be careful about seeing peaky prices as a problem. Actually, prices going up and down create big opportunities for people who can be flexible. In a world we want to decarbonise, we want the price to be high when electricity is high carbon, and we want the price to be low when electricity is low carbon, and we want communities to be able to charge their vehicles and heat their water in the troughs and hold off pulling electricity in the peaks. That is actually one of the key ways in which we decarbonise.

Chair: We will be exploring some of these topics in the next half hour. I apologise to colleagues if I have eaten too much of your lunch with my questions. Over to Robert Goodwill.

Q10 **Mr Goodwill:** Thank you, Chair. I think you have done sterling work in holding back our witnesses' enthusiasm to talk about their projects, but now is their chance. Starting with Alastair, could you tell me a little about the project you have been involved with and what role you specifically played, either as an individual or a local government officer in delivering these projects in Devon? I will then move on to Anda.

Alastair Mumford: Apologies for giving some detail earlier on. I will try not to take up too much time and repeat what I have said. The role of myself and colleagues, including Doug Eltham, in particular, has been around trying to secure external funding to run programmes to support community energy organisations, through providing them with technical support, such as business support-type activities to help them to grow or toolkits—so actual legal documents for them to take forward.

But it has also been vital to connect organisations up with the commercial sector, particularly around retrofits. We had two programmes, both under the ERDF—the European regional development fund. Those were Ready for Retrofit and Zero Energy Buildings Catalyst. Part of that was building up organisations' supply chain knowledge.

We are also starting to contract organisations in to deliver services, as I mentioned earlier on, and to test and develop things, such as interventions into the domestic retrofit able-to-pay market, as well as things like a synthetic power purchase agreement. This could really be a good way of the public sector ensuring that new renewable schemes are started, but within their locality, and that they are community owned, while still complying with procurement regulations.

Connecting back to the talk around local markets, we are also working with licensed suppliers at the moment to try and see whether there are any tariffs that can be developed so that we can find some kind of premium for locally generated and locally community-owned renewables.

Q11 **Mr Goodwill:** Anda, what role have you been playing in Northern Powergrid? Have you been holding people's hands? Have you been facilitating schemes? Have you been more proactive in encouraging schemes? How is that progressing?

Anda Baumerte: Thank you for the question. As an energy network with a local presence—an anchor organisation, if you like—our role lends itself quite well to being a support organisation for community energy and an enabler, as well as connecting it up with expertise around the energy sector where appropriate. We have had an engagement programme for community energy since about 2014. In 2014-15, we put in place a community energy seed fund, which since 2018 has been delivered together with Northern Gas Networks, creating a larger pot of funding and extending the scope of the fund.

We published a community energy engagement strategy last year, taking 26 different actions to support community energy groups. I will give you some examples of what we are doing in terms of support for these groups and stakeholders. We hold events that are participatory and open for everyone to join, and we hold community energy forums. We also offer information in terms of materials and guides available on our website, as well as an opportunity to have direct conversations with us.

We also link community energy stakeholders to other appropriate support organisations, such as local authorities and Community Energy England. We send out quarterly newsletters, and we also have connection surgeries, where community energy groups can come and discuss their projects and their technical requirements one to one with one of our engineers. That is all in addition to the community partnering fund we deliver, which can provide funding for community energy schemes.

Moreover, we also on occasion get involved in innovation projects in partnership with community energy groups. For example, at the moment we are involved with the Boston Spa energy efficiency trial, which is looking to use smart meters to manage the voltage on the local network. Creating energy efficiency in the local network also creates cost savings for the local community. If successful, we project that those cost savings could be in the range of between £68,000 to £270,000 for the local community, and even more could be scaled up to the UK level.

We have had some other innovation projects that have now concluded, which have trialled different innovative approaches beneficial to networks. We have also partnered with community energy groups in those, and we have partnered with Energise Barnsley to trial the deployment of batteries and solar panels. We ran a small innovation project using gamification and mobile gaming, too, to encourage people to change their demand and their energy consumption.

I would like to use this opportunity to invite Patrick to add to what I have mentioned and maybe share some thoughts on what we are planning to do when we look at that growing interest from community energy stakeholders and how we support them in the future.

Q12 **Mr Goodwill:** I was going to ask Patrick whether these schemes would be delivered if it wasn't for the way that Northern Powergrid have been helping, incentivising and facilitating people. Is it something that, even without your participation, would be happening, or is it important that

Powergrid itself is pushing these schemes along?

Patrick Erwin: Some of them would have definitely happened. We have some really engaged and very active communities in our area that are running projects, and they certainly would not do that without us. But, across our patch, we have got the lowest level of community energy projects of any part of the country. We have seen being a catalyst for community energy as a really obvious thing for the network operator to do. Some of the innovation projects we have been running have been things that you can only do at least in partnership with the network operator.

I am really excited by the Boston Spa energy efficiency trial, which Anda referred to, because what that does is pull together smart metering data with our smart grid control systems, which we deploy on our network, and we are using the voltage from our smart meters to actively manage the voltage on the network. That is something that only the network could do, but in partnership with the community. I think there will be more of those kinds of things going forward.

Q13 **Mr Goodwill:** Are some of these projects on the edge of financial viability, and only because of grant aid or the fact that the people investing in them are maybe not looking at the same payback periods that a commercial organisation would? In my constituency, on the River Esk, there is a great scheme with an Archimedes screw, but there did not seem to be much slack in the scheme, and a couple of major breakdowns would probably have made it completely unviable.

Patrick Erwin: It depends. A lot of the issue here is that the people who want to deploy the technology do not necessarily have access to the capital. We certainly think that there is a role to play with some funding, or with local authorities playing not a guarantor but a co-investor role to make the economics work. As Alastair said, one of the issues we face in the electricity sector is that electricity is heavily overtaxed, whereas gas is heavily undertaxed. That creates these fiscal distortions and makes projects that should be economic uneconomic. Also, the regulatory barriers mean that it is quite hard to monetise some of the benefits, because the way that the industry is structured does not envisage that, and therefore does not allow for it.

Q14 **Mr Goodwill:** How many of these schemes basically depend on people acting in a philanthropic way to feel that they are doing the right thing for the environment and their community? How many would stand up to a business plan presented to a bank?

Patrick Erwin: It has to be done on a case-by-case basis, and it depends on what your cost of capital is. A lot of these things do wash their face if you are investing for 25, or 40 years, but they would not necessarily wash their face if you are investing for five.

Q15 **Mr Goodwill:** Understood. Going back to Alastair from Devon. Is it actually within the remit of a local authority to be involved in energy generation projects? Is this a political decision made by your political

masters, or is it something that you think all local authorities should be doing, and maybe Devon is leading the way?

Alastair Mumford: I am sure Devon is leading the way. Devon County Council is slightly different from other councils. Other councils have borrowed to invest in generation. There have been quite sizeable investments by local authorities in solar PV, wind or whatever. At Devon County Council, when the Conservatives came into power, they decided that Devon County Council was a non-borrowing authority. That was actually one of the reasons why we started going to talk to community energy organisations—because we needed to find funding from elsewhere to be able to deliver schemes. But Devon County Council has only done this on a small scale, up to 100 kW, on roofs. We have not done any large-scale, ground-based solar PV, wind or whatever. That is to come, and that's where the synthetic PPA arrangement comes in, because—going back to your question from before—what the developers need is long-term confidence on price. If they can get that, they can definitely go out and raise money, on a commercial basis or locally. That is what a synthetic PPA or any kind of PPA can do.

The other problem we have without the feed-in tariff and other subsidies is that the benefit that we can provide to a consumer is less, so we also need the consumers to be happy with less of a saving. That then pushes this to a larger scale. If you have larger-scale roofs or larger-scale ground developments that have long-term PPAs, you can raise finance on it. But, yes, I think it's for all local authorities to see whichever way works best for them to deliver renewable projects, and working with community energy organisations can definitely be a way to do that.

Q16 **Mr Goodwill:** So is some of this dependent on the fact that you, as the local authority, can borrow money at very competitive rates and you are underwritten by the council tax payers? Is it the case that some of these schemes would not be deliverable commercially, without the council behind them?

Alastair Mumford: Yes. Obviously, Devon County Council has not done that; we have not borrowed money for renewable schemes. But other local authorities will have, I imagine, borrowed from the Public Works Loan Board; and, yes, the interest rates there are very good. Also, those local authorities will probably value the carbon more than other entities.

Mr Goodwill: Thanks very much. Back to you, Chair.

Chair: Thank you, Robert. Caroline Lucas, you have a few more questions on barriers and their removal.

Q17 **Caroline Lucas:** Thank you, Chair. Let me just declare my interest, which is that I am a member of Brighton Energy Coop and, indeed, a great enthusiast for the Brighton & Hove Energy Services Co-operative—that isn't an interest; it's just support, but I'm very glad that we have a representative from there with us today.

My question is this; what do you think prevents community energy in

Britain from being the runaway success story that it appears already to be in places like Germany and Denmark? And—perhaps I can ask this of Anda in particular—what are the main energy grid and network regulatory barriers that limit community energy development in the UK?

Anda Baumerte: Thank you for the question. I will refer to my previous comments and build on them, if I may. The common concern for community energy groups that we have heard about is that the environmental value they deliver, in terms of carbon reductions, is not consistently incentivised or communicated. There is value in carbon abatement and in reaching the net zero legally binding target, and there is a real ambition from local groups to do that and to do their part in doing it.

There are a couple of things that impact that. There is a gap between the policies that are required to get us effectively to the net zero target and the policies that are in place currently; and there is a lack of a level playing field between different fuels and technologies, especially in terms of how the cost of carbon or carbon abatement is communicated through the fiscal mechanisms.

In terms of regulatory barriers, I think we have touched on the barriers for the local supply schemes that are apparently not feasible. Many other schemes are not economically viable because of the two main reasons that I have just mentioned.

What we have also seen is that a lot of feasibility studies are being conducted in rural areas, funded by the rural community energy fund, and these groups believe that the connection cost that they identified as part of their feasibility studies can be a barrier for those projects. They have mentioned where they feel that they are delivering that decarbonisation benefit and other local social and economic benefits in their local communities. That should be reflected in the connection cost, and, more generally, they believe that it should be addressed through taxation. Those are some points of feedback that we have been receiving from the groups involved in those projects in rural areas.

Q18 **Caroline Lucas:** I will put the same question to Alistair but also pick at the fact that, elsewhere in Europe, the right of local supply gives a much broader meaning to community energy, allowing schemes to supply local communities with lower-cost electricity. How much of a barrier do you think that is—the fact that local community energy groups cannot share their energy themselves because of the regulatory barriers to that?

Alastair Mumford: It is definitely a barrier, but only if the consumers are then going to pay a little bit more because we haven't got the subsidies. We have to create that subsidy by selling the electricity for a little bit more. If we could sell it locally and people saw value in buying local renewable energy, that premium would help more projects to happen. It is either that, or we get carbon taxes or subsidies to level the playing field. Yes, local supply would be an amazing thing—to be able to think that you could just trade within a locality.

In terms of other barriers, though, I would also say that the definition of community energy needs to be tightened up so that it means not only owned by a community energy group, but managed or run by an community energy group. That would be an important step as well.

In terms of levelling up through carbon taxes or subsidies, there is also the incentive for communities that needs to come through as well—whether we can get tax relief on community investment in renewable and energy efficiency projects, and whether we could get business rate relief for heat networks that are delivered with community energy groups, which would seem to be a good connection. We need something to give communities that little foot up to do things.

Q19 **Caroline Lucas:** As I understand it, there is a ban on community energy benefiting from social investment tax relief, and there has been a change of the rules in terms of co-operatively owned energy firms no longer being considered as co-ops and being pushed down a route instead of going into selling bonds, which obviously is a much more complex situation.

Alastair Mumford: Yes. I do not specifically know about those two examples, but I know we have had, in the past, the EIS—I have forgotten what the acronym stands for. That was around shares, and that was a really good way—it was a tax relief mechanism, really. Actually, that was not dedicated to community groups, I don't think, but you are right: something needs to come in to remove those barriers and provide an incentive.

Q20 **Caroline Lucas:** Maybe I can go to Patrick now. How well do support schemes such as Ofgem's regulatory sandbox and the proposed changes in the network access review address the barriers to community energy?

Patrick Erwin: The regulatory sandbox can be really powerful, but it is quite clunky to make it really work in practice. I think it is a good mechanism that allows for regulatory innovation, which is needed to make some of these things work. The access and charging review is up in the air, so we don't know where it is going to land.

It really comes down to who pays for network connections, and the direction of travel is for the generality of customers to pick up more of a cost of any connection. That will help reduce connection charges, but it means that more of a cost will get shared and imposed on everyone, which has a social impact. You have to weigh those things up very carefully. It is not going on general taxation, for example.

What that does get into is a role that both network operators and local authorities can play. Almost always it is cheaper to connect a collection of projects in a community energy scheme than it is to connect things individually, so one of the things that community energy groups and local authorities can do is pull together lots of things into a scheme and connect them together in an integrated fashion. That can bring down the connection cost.

We are doing a bit of work with the National Farmers Union at the moment, who are looking at farm diversification and how to deliver decarbonisation on the farm. That will almost certainly involve higher electricity demands in farms, for things like grain drying and electric vehicles—literally, electric combine harvesters. If you are going to invest in that grid capacity, there is less scope for that farm to become the community energy hub, maybe with some locally owned solar, a set of community charging posts for cars and also a farm shop. It is that kind of thinking we need more of to create these clusters.

Q21 **Caroline Lucas:** My last question is, what else do we need to be able to make the most of community energy? Each of you has given some examples, but it does not feel like they are commensurate with the potential for community energy in this country. It still feels as if it is seen by Government as the cherry on the cake, not at all a substantial part of the cake. In evidence, BEIS said that it continues to see community energy playing only a small role, and yet we know that in other parts of Europe it plays a much bigger role. We know that the capacity of community energy projects grew 37% a year when there was the right regulatory framework and the financial support behind it; now it has gone down to just 4% growth a year. What else do we need? Do we need a community energy strategy? What change in thinking do we need in Government? In the energy White Paper last year, there was only one reference to community energy, and even that was tokenistic, so what is lacking?

Patrick Erwin: I will kick off, but I am sure that others will have views. We are currently thinking about our business plans for the next regulatory period, which runs through from ’23 to ’28. We are proposing two things for that, which I think are important here: first, to create a bespoke small pool of community energy advisers, who will help catalyse and shape best practice, but also know their patches; and, secondly, to put more resource into supporting our local authorities to create their local area energy plans. We think that those plans should and could have a really important role to play in community energy.

We think that that is our part of the story. Ultimately, we think that this needs a bit of support, whether through local authorities or some national schemes to support community energy, to get it going and to help us disseminate best practice and to create not quite cookie cutters, but a toolkit to make it easier for individual communities to set up these kinds of schemes.

Q22 **Caroline Lucas:** Finally, to Alistair, the same question, but also thinking about it from a local authority perspective. How much harder does it make your job if you do not have an enabling national framework? If we were part of the EU, we would be part of the EU clean energy package, which, for example, includes the right to sell and share energy between different members of the energy community. What is that like, from your perspective?

Alastair Mumford: It is a difficult question to answer, Caroline, as you know. Yes, the energy markets in this country are incredibly complex. However, anecdotally, I have heard that a German delegation was over who were really interested to see how we did our market, so there must be something that works well—but there is a lot that does not seem to work well. I don't know enough about it, but it is very complex. For community energy groups to get involved in balancing and settlement, then all the charges, DUoS and TNUoS, would be ridiculously complex, so it is difficult for them to do that.

In Devon, we have seen something. I don't know whether that is because the Transition Town movement started in Devon, so there was some sort of strong foundation, or because we have a lot of people retiring to Devon so we have people who are able to volunteer, or whether it is something to do with high levels of solar radiance, but all that has come together, with the feed-in tariff and the subsidy, and then we got things to happen.

It is just about creating that again. If we can get that level playing field and a carbon tax, and if we can give some resources to renewables, in parallel with the support structures that Patrick was alluding to, in local authorities with people who can give time to community groups to help them develop, maybe something will happen. I am not really answering your question, Caroline, but I wish it was there, I have to admit.

Chair: We will have to conclude that, Caroline, or we will run out of time.

Caroline Lucas: May I say one thing? It strikes me that one of the problems of community energy is that it does not have a strong enough lobbying force because, by your very nature, one of your benefits is precisely the fact that you are decentralised, but that is a weakness when it comes to banging on the door of Government. I hope that we can do that with this report. Thank you, Chair.

Chair: Thank you very much Caroline. One final question to this panel from Helen Hayes.

Q23 **Helen Hayes:** Thank you, Chair. I will first say how pleased I am to see Sustainable Energy 24 on the next panel, as it is based in my constituency and is making great strides with the delivery of community energy in south-east London

My first question is for Alastair, but others may want to chip in. Many local authorities have made a declaration of the climate emergency, and are consequently developing action plans to deliver against that declaration. What are the challenges that local authorities face in developing suitable action plans?

Alastair Mumford: There is the big one, which the UK Government and lots of organisations face, and that is around our supply chain. Devon County Council has declared a climate emergency, and we have said that we will be net zero by 2030, which will be at least a 70% reduction in carbon, and no more than 30% offsetting.

We are including our supply chain in those carbon emissions, and that is a complex area because so much of our supply chain is outside of the country and we have no control over it. That is the biggest problem that I think most local authorities will encounter.

The other big challenge is, of course, moving to low-carbon energy through energy efficiency or renewables. I would think that, for those, the technology is all there; it is just about the finance structures to deliver it. We have seen the public sector decarbonisation scheme—that looks like a good first step, but we will have to go much further than that. There are still some very complex areas of our carbon footprints and we do not really know how we are going to address them.

I think we need to see some work on carbon offsetting. There are some regulations around that, but I think they need to be tightened up and extrapolated. We are very fortunate to have a farms estate, so one of the things that we are looking to work on at the moment is whether we can carbon-offset through our farms estate. Can everybody carbon-offset through the farms of the UK? Much more work needs to be done in that area.

Anda Baumerte: We cover an area that spans more than 30 local authorities, five combined authorities and about seven local enterprise partnerships. We are working closely to understand their decarbonisation ambitions, plans, and delivery programmes. We are observing that a number of them are moving at quite different speeds, and that often comes down to the constraints on their capacity—both with financial and expert resources.

We think that there are strong synergies between what local authorities want to do and what community energy groups are aiming to do. More than half of our local authorities want to achieve that net zero target early, which is mirrored in the ambitions of the community energy groups.

To sum up the key barriers that they face, we know that ambitious, urgent local action delivers a lot of environmental benefits, most notably in terms of carbon reduction. The social benefits include local jobs, and channelling that investment, which benefits the local community—and that is true for community energy initiatives, as well as for local government-led initiatives, with that local focus. However, for them to go ahead and take place, or be started, they need to be economically viable.

That goes back to the discussion we have had today about some of those regulatory, market, and fiscal barriers, where those environmental and social values are not fully captured or communicated in a way that makes those local projects—whether community or local government-led—stack up at present. However, there is no lack of local ambition, and no lack in their sense of urgency to really do their part and achieve that target early.

Q24 **Helen Hayes:** Thank you very much; that is really helpful. In your experience, how variable is the support for community energy among local authorities? I know you mentioned that they are moving at different

paces with regard to their action plans for the climate emergency; how central, typically, is community energy to them, and to what extent does that translate into meaningful support for schemes in different localities?

Anda Baumerte: In some cases it will be down to awareness about community energy, which is an area that needs some further improvement. Of course, we only see what is happening in the north-east—Yorkshire and northern Lincolnshire—from our perspective, and many are better placed to comment on the support available. What we are aware of and what these groups have been telling us is that there is support available in terms of the rural community energy fund, but that is specific to rural groups. There are some bespoke support mechanisms that either local authorities or DNOs such as ourselves are putting in place, but it will vary from local area to local area whether they have capability to put in place some bespoke support mechanism for community energy as well.

Q25 **Helen Hayes:** Thank you. Alastair, from the perspective of Devon County Council, what are the benefits to local authorities from encouraging community energy in your area and are there any drawbacks you would like to draw the Committee's attention to?

Alastair Mumford: Things can take a bit longer with community energy groups than maybe with the private sector, but that is quite big of me to say as a local authority where things can take even longer. There is a whole host of benefits really. We have had a report done by CAG, which we will be publishing soon. It has looked into the benefits of community energy. I can go through in detail, but just to look in terms of economic value.

Based on entering into a synthetic power purchase agreement—a commercial arrangement with a developer to deliver 30MW of solar PV panels—if we did that through a community group, it would probably cost us about £2 million more over 20 years, compared to doing it with the private sector. But, compared to the private sector, it would deliver £15.9 million-worth of extra economic value to the Devon economy. So, it just stacks up. It really stacks up. Those benefits, which we have talked a little bit about today—the local multiplier effect with the community funds, and the funding of fuel poverty work—is a no brainer. It really is working in with the community energy groups.

If I could just add into that from the economic point of view. Onshore wind is the cheapest technology at the moment. If we can make that happen—it would seem stupid to do that without communities—and there is a community energy group, we can sweeten the pill of onshore wind by putting stipulations in for working with community groups.

Q26 **Helen Hayes:** Thank you very much. That is really helpful. I ask Patrick now, and Alastair you might want to comment afterwards from the Devon perspective: what is the policy framework that local authorities should be using to facilitate, encourage and help deliver community energy? Is that policy framework in your view already in place or are there new policies

that local authorities should be introducing in order to make this happen?

Patrick Erwin: It is fair to say that what policy there is is pretty fragmentary at the moment. We think that both at a national level and at a local level, Governments and local governments need to be thinking about what their national and local plans are, and fitting community energy into those plans as part of an integrated planning exercise. Having worked out what they want, they should then work out how they want to support it.

We think the energy White Paper was a really big step forward, but it was only a step. The challenge we face collectively is that the way the energy market is currently structured is not really designed for delivering 2050. We can see that significant organisational change will be needed to set up the energy system in a configuration within which it can credibly decarbonise.

We need to get there at a national level first, but doing the local reforms as and when we can in anticipation of it. The first step I can see clearly is this local area energy polling, which is thinking about how we create low carbon communities and grasp the opportunities to do that in a way that creates resilient and engaged local communities. That would capture the local value but also rapidly decarbonise. So, that is where I would start. I cannot see much further ahead than that ahead of having that national framework.

Helen Hayes: That is really helpful, thank you. Alastair, do you have anything to add?

Alastair Mumford: I am more of a delivery person than a policy person, but I suppose, going back to one of the points, having a very good policy on what is community energy will be important. So, going further than community ownership, having community running the project is going to be an important step for local authorities. Maybe they move to energy that, as well as being from green tariffs that have got a power purchase agreement at the back—so a proper green tariff—is community-owned as well. Then again, around the planning, the national planning policy framework should allow for local authorities to prioritise those developers that are community owned.

Helen Hayes: That's great. Thank you very much.

Chair: Thank you very much, Helen. I want to conclude this panel by thanking our panelists Alastair Mumford from Devon County Council and Patrick Erwin and Anda Baumerte from Northern Powergrid for joining us today. You are very welcome to stay for the second panel, which we will go straight on to now.

Examination of witnesses

Witnesses: Kayla Ente, Paul Hallas and Dan McCallum.

Q27 **Chair:** For the second panel we continue our geographic diversity. Having

been in the north and the south-west, we now have panellists from the west, Wales, south London and the south coast who organise or help to run community energy projects directly. I would like to welcome, first of all, Kayla Ente from Brighton & Hove Energy Services Co-op, which Caroline Lucas has already referenced.

Kayla Ente: I am the founder and CEO of Brighton & Hove Energy Services Co-operative. We have 57 community energy projects running. Our asset value for generation and energy efficiency assets is at £1.5 million right now, and we have eight employees.

Chair: We are also joined by Paul Hallas from SE24 in Dulwich.

Paul Hallas: Good afternoon everybody. I am one of seven volunteer directors with SE24. That is Sustainable Energy, but it is also our local postcode in south London on the borders between Lambeth and Southwark. We are lucky to have Helen as our local MP. Thanks to her for the shout-out earlier on. We formed relatively recently—2015—and obviously the activities that we have are much more typical of a big city. They will be different from those we hear about in Brighton and in south Wales.

Chair: Thank you Paul. Dan McCallum is another co-founder of a group in Wales, Awel Aman Tawe. Correct my pronunciation, please.

Dan McCallum: Thanks, Philip. It is Awel Aman Tawe, and Awel means wind. If I look out of my window here—we are 20 miles north of Swansea—I can see a huge opencast mine. Also I can see our wind turbines up on the hill; so the energy transition is happening right here. I have been involved for about 20 years in the sector, and we have developed a community windfarm and also Egni Co-op, which is a rooftop solar co-op in south Wales.

Chair: Terrific, thank you. Well, you will have plenty of opportunity to describe your activities for the remaining hour or so of this panel. We are going to go to Ian Levy to ask the first set of questions.

Q28 **Ian Levy:** Thank you to the panel for coming before us today to give us a picture of what youse are about. Could you describe some of the energy projects that your community energy groups have developed? Kayla, do you want to go first?

Kayla Ente: Yes, sure. We have a variety of projects. We look at the entire property. We will do energy efficiency, and we combine that with generation. We have done a heat network on biomass boiler. We are working now, and we have been working for three years, on the decarbonisation of a rural community by—originally, it was heat networks. So we have about 750 kW in generation capacity at the moment and 30% of those are heat.

Q29 **Ian Levy:** Brilliant. Paul.

Paul Hallas: As I said, we focus on the kinds of projects that work in the big city. It has been primarily rooftop solar so far.

It has been primarily rooftop solar so far. We have six projects with schools, churches, community premises, a hospice and so on. We have been diversifying more recently into energy-efficient LED lighting projects, especially with schools. As other speakers have said, we are probably going to diversify further in the future into areas such as heat pumps. I know that some of our sister organisations are already active there in south London. Probably what we will not do is the large wind and solar farms that are more typical in rural and semi-rural areas.

Q30 **Ian Levy:** Last but not least, Dan.

Dan McCallum: I will mention our wind farm. It is a large project with £8 million funded through a community share offer, which raised £3 million, and Triodos Bank funding of about £5 million. It was interesting. That is what led us into developing Egni. We are expanding Egni Co-op. The revenue from that allowed us to kind of seed-fund the development of rooftop solar in Wales. That is now 4 MW of rooftop solar. I think it is the largest rooftop solar co-op in the UK. It happened as a result of the revenue from the wind farm.

The other interesting thing is that we bought one of the former primary schools in the village, and we are developing that as an education, arts and enterprise centre, trying to create local jobs in our area, which is a former coalmining community.

Q31 **Ian Levy:** Thanks, Dan. Going forward, whenever we try to develop things, we always hit problems, snags and bumps along the road. Are there any projects that you have tried to develop but have not been able to? Can you give us a brief idea as to what the main barriers and problems have been? I'll go round the table again. Kayla first.

Kayla Ente: For us, the primary barrier is the economics. We have done solar on schools. We had the feed-in tariff, so we were able to deliver significant savings to all the schools that we installed the solar on. But those contracts are 20 or 25 years, so you have to have a customer who is willing to commit to those longer returns that you get from renewable generation. The technology will deliver the savings, but it is over a longer period. It really is about making the economics and the price of the heat work for the customer.

As was so well pointed out in the first panel, we are dealing with an uneven playing field with heat. We are looking at electricity prices that are significantly higher than gas prices, for example, or any fossil fuel prices, so the customer will be starting from the point where they are not really willing to pay extra for the renewable energy provision. It is ultimately up to us to create the business model that works for the benefit of the customer. The customer really expects savings—

Q32 **Ian Levy:** Definitely. To be honest with you, Kayla, as the questions go on in this session, we will be looking at the financing and will maybe draw some questions out on that one. There will be an opportunity to delve a bit deeper into it.

Paul, did you have anything to add?

Paul Hallas: I have perhaps three quick things to say. First, we all had to refocus after the feed-in tariff scheme came to an end. Some of the smaller projects that we had done in the past simply would not work any more from an economics point of view. We will probably talk about the policy issues, but community energy is looking to be treated no worse than bigger renewable schemes. We will probably come back to that.

The second issue I want to highlight is partnership. Obviously, our hosts expect savings. That is completely understandable, but they also have to be willing to commit a bit of time and effort to getting these projects off the ground. If you think about schools, they have been hard pressed with so many things in covid times. Building enduring relationships as a trusted partner is important. Sometimes we have seen schemes come off the rails because the basis of that partnership has not quite been there.

The third thing, which I want to emphasise is not really a problem, is raising community finance. We generally have been able to raise finance through our investors for any good project we can find. I want you to come away with the impression that the potential is there to finance far more community energy activity than we have seen to date. That side of it is not really an issue.

Q33 **Ian Levy:** Thanks a lot. Finally, Dan, are there any problems you have come across?

Dan McCallum: One of the gaps is the lack of a current community energy strategy at national level. Caroline flagged up previously the fact that, in the last couple of years, it has gone off the agenda at a political and policy level. One thing that could come out of this Committee that would be really helpful would be for that to be raised back up the Government's agenda, because there needs to be that partnership if we are to get to zero carbon.

One thing I would say is around procurement regulations. There is no easy answer on that. Alastair referred in his evidence to the fact that they want to support community energy and they are looking at the synthetic power purchase agreement as a way to do that. We certainly did find an issue with procurement with the roll-out of Egni solar. How could local authorities give us the right to put rooftop solar on their schools, for us to sell them the power over a 20-year period? Is that favouring one legal entity, or would they get sued? That is the fear, and it is real.

We did manage to work with three local authorities really effectively—Newport, Swansea and Pembrokeshire. That underpinned the real development of Egni on the other sites. I think we need to highlight the good examples of where that partnership does exist, to give more confidence about how to deal with procurement in a fair and transparent way that meets local social and economic goals.

Ian Levy: Thank you. I really appreciate your answers. I will hand back to the Chair.

Chair: Thank you, Ian. I am intrigued, as a former Procurement Minister in two Government Departments, by what you just said, Dan. Although some members of the Committee might find this anathema, one of the benefits of coming out of the EU is that we are now able to adopt our own national procurement rules, which will allow us to take into account social value in the area in which the procurement is taking place. I hope that is something that we as a Committee can pick up and take forward in our recommendations. Thank you.

Now to the north of the country, to John Mc Nally in Scotland.

Q34 **John Mc Nally:** Thank you, Chair. My questions are on the role of community energy in net zero. I have to declare a non-pecuniary interest in the development of two community energy projects in my own area.

First, to Kayla, what aspects of decarbonisation can community energy contribute to? For example, what benefits and what savings are to be had? What possible improvements in energy efficiency, air quality or biodiversity can community energy contribute to on a local level?

Kayla Ente: That is an excellent question, thank you. I have looked at a lot of net zero strategies from various communities from a business angle to see how we are going to be able to work with local authorities in the area of Sussex. There are two points that really show where we can be supportive.

First, most plans do not consider the existing built environment. They are only dealing with energy efficiency in new developments. We have a retrofit co-ordinator on our team. We have a domestic energy assessor and a retrofit assessor, and we have access to advanced software that can help us work out energy efficiency measures to do on a community level. That is one of the things that we did in a recent project here in East Sussex. This can help local communities identify measures because the primary issue around heat pumps is that, to run them affordably for the consumer, you have to have a property that is efficient and can retain the heat. You do not want to run that heat pump all the time and incur a high electricity bill because you are losing the heat owing to draughts and improper insulation.

The other issue is that the margins on these developments are really small. One of the questions in the first panel was about commercial margins. The advantage of community energy is that we work with lower margins because our targets are about delivering environmental and social value to communities, not about profit taking. We do have to earn profits to continue as organisations, but those are minimised.

Q35 **John Mc Nally:** Thank you for that excellent answer. Dan, may I move on to you? Are there any benefits related to decarbonisation that are unique to community energy over commercial renewable energy projects, following on from what Kayla has said? Are the community energy projects better engaged, with consumers gaining a better response within their own community needs associated with net zero? In Scotland, we have seen a growth in locally-owned energy projects, and a better share

value in these. I know that in my area the community project developed with a part share in every wind turbine that went directly into the community. I think that helped to kickstart, or pump prime, a lot of people into that particular area. Could you give us a wee bit more information on how community energy projects are desirable over commercial energy projects?

Dan McCallum: We have had a lot of support from sea or wind projects in Scotland. One example is that, as part of our wind farm, we donated co-op shares—about £100,000 worth—to local community organisations that would not otherwise be able to invest, such as the youth, rugby and football clubs, people who would not ever think of investing or buying shares. That increased confidence in the co-operative model, and it retains value in the local economy. As I mentioned, it kickstarted the development of Egni, which funded solar panels on schools and community buildings, many of which were, and are, hubs for food banks during the covid crisis. By having lower electricity costs, those buildings can maintain their function within the community. We are not charging them for the electric from the solar panels. We are charging the schools, so there is a cross-subsidy within the community and energy sector. It is difficult to capture the range of benefits from community energy—we have to be honest about that. It is there, but it is not quantifiable. Yes, we produce x amount of kWh and carbon savings, but there is a range of social and community benefits that are hard to pin down.

Another thing that we have done in schools, which a commercial developer would not do, is work with another charity called Energy Sparks. We have a brilliant energy portal, which looks at real, half-hourly data for gas, electric and solar in the schools. It has curriculum materials—the children can analyse that data to look at further measures they could do. In a sense, we are working against our own interest, because they might end up reducing the electrical demand, which reduces the amount that they might use from our solar panels, but it is the ethics that are important. Those partnerships can come about from community energy.

Q36 **John Mc Nally:** Thank you for that fascinating answer, Dan. My last question is to Paul. Do you think that the UK could reach net zero by 2050 without community energy? What do you think MPs could, and should, be doing more of in our communities to reach net zero by getting more community involvement?

Paul Hallas: Thanks for that question. It points us in the direction of behaviour change. You have probably seen that the Committee on Climate Change recently pointed out that—I think—about 60% of all the abatement we need to hit net zero will depend to some degree on behaviour change, whether that is individual or societal behaviour change. That is where community energy comes into its own because we know that local works.

There is no better way of engaging local people, and we can do that through projects and simple things like, when we have implemented a project, putting a display panel in the entrance so that everyone can see

what the project is delivering. We also do that through education and events, making it real for people. If you think about the things that people need to do—make their homes more energy-efficient, move over to electric vehicles, decarbonise their heating and all those things—they are difficult. People need to understand them better, in a way that makes sense in the pub, as an earlier speaker said. That is one of the things that community energy can do, which is communicate in a way that is trusted and so that people understand what it means for them. That is absolutely key.

What more can MPs do? In our case, I have to say, nothing—we have a perfect local MP. More generally, MPs can sponsor that kind of community event—community education—so that it can create greater awareness of what community energy organisations are doing and help community energy to link with other active members of the community, as we are doing, for example, in Dulwich and West Norwood, or with Community Climate Action and things like that, as well as putting on events.

I guess the other thing that I should mention is the role of community energy in effectively ploughing back any financial surplus into the community, trying to make sure that the vulnerable and fuel-poor are not left behind in the net zero transition. If we lose that kind of popular support and engagement, we will never achieve the targets that we are aiming for.

John Mc Nally: Thank you, all three of you. I will hand you back to the Chair.

Chair: I very much hope that Helen heard you then, Paul. If not, perhaps you will talk to her afterwards, to explain what you said. Thank you, John, and on to Barry Gardiner in London.

Q37 **Barry Gardiner:** Thank you, Chair. I want to focus on the issues of funding and Government funding, in particular looking at some of the changes that have taken place over the past few years. The feed-in tariffs went in 2020, the non-domestic heat incentive closed just two weeks ago, contracts for difference have no special provision for community schemes—then projects have to be over 5 MW—and the community Smart Export Guarantee does not seem to be much of a guarantee. I want to get your feel for how all the different changes that have gone on in the past decade or so have impacted on community schemes such as yours. Kayla, do you want to begin, then we will move to Paul and Dan?

Kayla Ente: The other one is the enterprise investment scheme. I do not understand why that was taken away from us when it still allowed for commercial businesses. That seems to me to be a no-brainer: if people invest in community energy, they get the same tax credit as an investor in any other business that qualifies for that.

The other huge impact has been on solar installs. We cannot do solar installs under a capacity of about 20 kW. Really, in my mind, solar PV is a no-brainer. It is a great way of generating electricity for free. It is also

using our rooftops as assets. We have great rooftops. For anyone with a good south-facing roof, that is an asset in the community. We would like to move to a vision in which we have neighbourhoods where, with houses that are south-facing and can generate power, we can build everything into a type of microgrid so, as they said in the first panel, we are helping to mitigate some of the cost of reinforcement of that grid in order to meet our net zero targets. I could really talk for a long time but—

Q38 **Barry Gardiner:** Thank you for trying to focus in a positive direction about what you would like to achieve. For our report, we also have to analyse where things have gone wrong, so can I draw you back to the less positive part of my question? It is not that I don't want to be positive—I do—but I want to analyse how the changes that have gone on in the structure have impacted upon community projects.

Kayla Ente: All right. We will not be able to do smaller heat networks any more. That is a fact. The non-domestic RHI was a key subsidy for decarbonising communities. We just had to abandon a project on that. We are also now trying to figure out how we are going to develop decarbonisation projects, especially in rural communities where they are burning oil for heat. Burning oil not only creates carbon, but it creates air pollution in those communities. My contribution is to lament the end of the non-domestic RHI, with no alternative. I do not see an alternative.

Q39 **Barry Gardiner:** Thank you. Paul, can I ask the same of you?

Paul Hallas: One thing you did not mention is the loss of the urban community energy fund a few years ago. In London, we are lucky to have a community energy fund run by the GLA and a few of the boroughs. It is great pump priming; it generates so much more opportunity and pays back for itself many times over, but it is patchy.

We would like to see a situation where more local authorities are empowered and resourced to put such schemes in place, because they are a kind of catalyst for the effective co-operation between community energy and local authorities that we have all been talking about today.

Q40 **Barry Gardiner:** How has this affected the financial viability of community projects such as your own?

Paul Hallas: As somebody said earlier, it is difficult to pick one thing out. It is a cumulative effect of measures. Where community energy funding is available, it enables us to do the hard miles in the early development stage of projects and enables us to pass more of the savings on to the host, as well as being the platform off which we then go and raise several times as much in terms of community finance. It is win, win, win. Obviously, where it is not there, there is a case of missed opportunity, so that is one.

The other thing that I think you mentioned is the so-called smart export guarantee. I am trying to work out why it is called smart and why it is called a guarantee, but again that will affect different people in different ways, but it contributes to the fact that small rooftop solar does not work

any more. If you are lucky with the smart export guarantee, you might get paid 5p per kWh—the best is probably 5p to 5.5p—when our partners are probably paying three times as much as that for the electricity they buy from the grid.

Of course, it is not guaranteed for more than 12 months, as compared to the contracts for difference that are available to large renewables projects above 5 MW. It just does not seem like a level playing field. I am not asking for massive subsidies, but just make the thing live up to its name. Some sort of guaranteed floor price over a period of years would make a big difference to some of our projects.

Q41 **Barry Gardiner:** So clarity and long-term certainty about revenue return?

Paul Hallas: Sauce for the goose, isn't it? If it is good for big renewables projects over 5 MW, why wouldn't it be a good thing for the small projects that we have been doing all over London?

Q42 **Barry Gardiner:** Indeed. Dan?

Dan McCallum: You have already summarised what has been taken away and the overall strategy as well. I just want to highlight that it would be great to see more backing for the Local Electricity Bill, which is going to MPs at the moment, because that looks at encouraging local supply and local network solutions. The previous panel talked a lot about the need for innovation in the network, and certainly that is something that happens a lot in European countries. The Netherlands have actually just introduced a feed-in tariff. That shows the value they place on it.

Q43 **Barry Gardiner:** It is 14.6 cents per kilowatt, which rather echoes what Paul said: it is about three times what is on offer here.

Dan McCallum: Yes, and we have installed about 4 MW of rooftop solar in the past year. That was really on the back of the feed-in tariff of about 3.5p. It is doable, but it is going to be really difficult without any subsidy or guarantee.

I just want to highlight another project in Belgium: Ecopower, which is a co-operative. They sell their power to about 50,000 customers there. The energy market in Europe is much more liberal than it is in the UK; there are many more participants. As other people have highlighted, there are lots of barriers to community energy getting involved in selling their power. When I have spoken to Ecopower, it is really interesting. Similar to us in schools, they obviously really encourage their customers to reduce their energy consumption, because it is in their values as a co-op, whereas you think about whether the big six are really sincere when they run various schemes to try to do loft and cavity wall installation, because they are actually competing against their own commercial self-interest. I really would like to see the ability for community energy to take advantage of the grid for smart solutions, but also potentially to sell power directly to customers. I think that would be a further way to engage people in energy issues.

Q44 **Barry Gardiner:** Thank you, Dan. I am glad that you have led us into

comparisons with what is done in other jurisdictions, which I think can be really helpful to the Committee's thinking. I want to put that back to Kayla and Paul. Are there other examples from elsewhere that you think we could well learn from and follow in order to see more community-based projects in the UK?

Kayla Ente: I am of Dutch nationality, and in the Netherlands you can buy power from a generator online. There are no regulatory barriers to your going online and buying your 4,000 kW of electricity from a wind farm. Here in Brighton we have the Rampion, but if it was a community wind turbine, I could buy my electricity from that community wind turbine, which would provide an assurance on the funding. If the customers are buying directly from the developer—from the community energy group—that would help you raise the funding, because you would have all the commercials in place.

Q45 **Barry Gardiner:** Is there a regulatory framework that it would make sense for this Committee, perhaps in making a recommendation about direct purchase of that sort, to point to and that would facilitate that?

Kayla Ente: I would have to do research into the Dutch regulatory framework. I have been living in the UK for 18 years, so I am not up to date with the regulatory framework in the Netherlands, but I know that obviously they have made changes to the regulation to allow this kind of direct purchasing from a generator.

Q46 **Barry Gardiner:** Thank you. It would be great if you wrote to the Committee with that. Would that be a recommendation that you would like to see the Committee make about direct purchase being possible from a community project such as your own?

Kayla Ente: Yes. If it was within the regulatory framework and Ofgem could gain comfort with that kind of direct transaction, it would empower us to be able to raise money for larger projects, say a wind turbine, now that we can do onshore wind, or maybe a very large—well, I am not sure about the heat networks now, because I don't think that you can develop a heat network without a subsidy framework.

Barry Gardiner: Paul?

Paul Hallas: I have one quick thought or observation, which is that in a lot of the countries where local community energy is particularly strong—let's say in Scandinavia, the Netherlands, Belgium and Germany—they have had a very strong municipal tradition, where a lot of energy decisions were made locally. I don't think we can ask the Committee to reinvent the last hundred years of British constitutional history, but there is a question of what we can do in our own circumstances, and I do see that more and more national funding is routed through local delivery, whether it is a public sector decarbonisation scheme, or social housing decarbonisation, or even the large part of the green home grant, which seems to be the only part that has worked properly.

If consideration was given effectively to earmark even a small part of that national funding through local channels to projects in which community energy participates, that would make a huge difference and would open up a whole new vista of opportunity. It would also help to reinforce that essential partnership between local authorities, community energy and the local community.

Q47 **Barry Gardiner:** Thank you. I wanted to pick up on one of the things that you said earlier, Paul, about the connection and threshold costs of setting up a scheme and the barriers that they present for community energy groups. I want to put to you something that I think Anda Baumerte in the first session alluded to. She suggested that there was no recognition, in a sense, of the public benefits of distributed smart energy networks and that those benefits should perhaps be recognised by Government support for groups to overcome those threshold costs, rather than their treating schemes simply on a commercial energy cost basis. If we were to look at doing that, how would such an incentive for community groups be best put in place to overcome those threshold costs?

Paul Hallas: Are you talking about project threshold cost, rather than the threshold cost of establishing a new community energy scheme, because that is another angle?

Q48 **Barry Gardiner:** I am talking about Government recognising that there is an element of public benefit—public good—that is being put forward, and that it should therefore receive that additional subsidy.

Paul Hallas: Excellent—that's clear. We have talked about a range of policy issues. The one that we know works is a kind of pump-priming community energy funding. We have talked about various types of community energy funding scheme. If I talk about our own experience, we were fortunate enough just to have had—I think—£70,000 of grants from the GLA's community energy fund, and off the back of that we will raise three times as much in terms of community finance and do a load of worthwhile projects for local schools in particular, and that has a great spin-off benefit in terms of engaging and enthusing the next generation. So I think that is really important stuff.

Regarding the precise detail, there are probably some variants that you could imagine. However, it should be something that recognises the value of community energy action in terms of pump-priming, because we will build on that, and then community engagement and enthusiasm will do the rest.

Q49 **Barry Gardiner:** Kayla, I note that you are nodding. Did you want to add something, or just nod in agreement?

Kayla Ente: No, I lament the fact that so much money is going to local authorities through the public sector decarbonisation fund and through the HNDU funding. HNIP will be stopping next year, and that was targeted towards larger heat decarbonisation projects. I have been banging on to our Brighton and Hove City Council to try to get a fund so that we could work with them, because of their access to lower interest rates. We could

work with them to pursue energy efficiency goals for the city. That has been going on for years with known success. In my mind, it would be pretty amazing to have access to some funding for that reason.

A small example of where community energy groups really add benefit is in development costs. If we look at heat networks and the £320 million for HNIP, it is important to analyse the value to the taxpayer on that level of investment. In our heat network, granted it was only 25 properties as opposed to a larger project, we received £80,000 from the Rural Community Energy Fund. The value for that investment—taxpayers' money—was much larger as it came from community energy, just because we can develop it at much cheaper cost.

Q50 **Barry Gardiner:** Dan, what policy changes do you think would be most important to ensure the financial viability of projects such as your own?

Dan McCallum: A guaranteed floor price. I am not a policy person, Barry, but I think that would really help to get some projects going. At the moment, it is just not there, so we are really struggling to develop any more rooftop solar on the basis of the current mechanisms in place. Some level of strategy or support for community energy at a policy level would make us feel that the sector is still important to politicians. The Local Electricity Bill has been developed and is supported by MPs. There has been quite a lot to engagement throughout the community energy sector about it and it probably needs a bit more work, but it certainly feels as though it is on the right track. That could draw further on what has worked in European countries as well.

Q51 **Barry Gardiner:** Thank you. This is to the three of you. To try to draw out the recommendations that you would like to see us pushing for, they include a guaranteed floor price—that consistency that means you can plan ahead and know that you are going to get the revenue in, so that you have a good investment framework. In addition, you favour direct purchase from community energy projects being possible, and connection and threshold costs being subsidised to recognise the public good that you are making available in addition to simply the commercial cost of the energy competing against other providers. Those are the three things that I have taken away from what you have said. Are there others that you would wish to add to that?

Kayla Ente: I would love to see mandatory participation between local authorities and community energy groups. Right now at Energy Services, we are the go-to organisation for all of the fuel poverty work in Brighton and Hove. Last week, I had the case of an elderly lady whose boiler had packed up and we solved her problem within three hours. That would not happen with the council, because she called me at 5.30 and the council would have been closed for business. Those kinds of things that community energy do for the people in our communities are invaluable because she had health issues and no boiler could have been a real problem for her. She had tremendous anxiety.

It is also about resolving issues of fuel poverty because as a society we do not measure the confidence levels that grow as a result of someone being warmer in their homes, and the fact that somebody in their community cares about them. Showing that caring means that somebody who may not have the confidence to look for a job will look for a job because now they have built that confidence.

Q52 **Barry Gardiner:** Community empowerment?

Kayla Ente: Yes. It's very important.

Barry Gardiner: Chair, you have been very patient with me. Back to you.

Chair: I think we are moving into an area that Duncan Baker will explore a bit further. Duncan.

Q53 **Duncan Baker:** I want to end on a positive and focus on the wider benefits that community energy producers contribute. We know that there are many, but perhaps we can flesh those out a little more. So, this question is to Kayla initially and then to the wider panel: can you please explore the wider benefits that the projects can provide and how those benefits differ from other small-scale energy projects, saying what is so unique about community energy projects?

Kayla Ente: I have one example, with the Solar for Schools programme. We prepared a report to demonstrate to all the business managers at the six schools that we oversee, showing how the solar array is performing compared with what we promised when we entered the contract. In one of the schools, we noted that they were paying over the odds on their energy contract with the council and we brought that to the council's attention. I believe that the council has taken action to resolve that on behalf of the school.

Being an independent advocate for communities is absolutely invaluable to ensure that the value gets delivered to a project. We do not just install something and walk away; we have an ongoing, long-term relationship with our customers, with some of them for up to 25 years. We are there, we are monitoring the situation and so we are taking proactive action.

I can give you another example. We put LED lighting in an indoor bowling court, which is mostly used by pensioners, over in Newhaven. There was a problem because they had 100 kW of solar on the roof that we had not installed; it was installed by a commercial contractor, who was taking all the feed-in tariff. From analysing their energy bills in connection with the LEDs, we noticed that they were paying their energy supplier on the solar generation. So, the supplier had connected it incorrectly at that site, and then for years they were paying the wrong amount to the energy supplier. In the end, we helped them to get a £5,000 refund from their energy supplier, just from our involvement.

Those are just two examples.

Q54 **Duncan Baker:** You wonder how much that happens throughout the

country. Can I put the same question to the rest of the panel? I will go to Dan first, if that is all right. Again, what are those wider benefits that are so evident, really?

Dan McCallum: I think I mentioned that we are in a coalmining area, one of the south Wales valleys. So, I think that for us it is about asset development and people being proud of what has been achieved. People can see the wind turbines up on the hill and feel pride in the fact that we managed to develop that large, significant project.

We have lots of school groups going up there. You can forget the planning concerns. It is just excitement. They just love looking up and seeing the turbines going round. One of the kids said to me, "Every hill should have one." There is a sense of being part of the future. Obviously, money is coming back into the area—one of the most deprived areas in the UK. The income that is coming back in is quite significant. Jobs are created, and it kickstarted Egni, the rooftop solar co-op. We were able to take that risk because we had the wind farm asset behind us. As I said earlier, lots of the sites that we have put solar on are community centres that are now running food hubs, which are a vital community service.

We are also seed-funding a new community electric car club in the area. Again, these sorts of thing are pretty expensive. There are not many people in our local area who could afford it, but with the wind farm putting seed funding in, and then sharing that car resource among the community, it is the sort of thing that can work. As one of the previous speakers said, it has potential benefits for the grid as well, because we will have car batteries there, not being used all the time, but it gives the potential, if the regulation changes, for that storage capacity to be used to help support the grid and make more efficient use of it. Again, we need the regulation change to enable that to happen. There are so many benefits and not all of them are quantifiable.

Q55 **Duncan Baker:** And they are so innovative. There are two examples there that I would never have thought of in a million years. Can I ask Paul the same question?

Paul Hallas: Just a couple of quick additions. To pick up on Kayla's point about the fact that we are rooted in the community, we do not just implement projects. We take care of them afterwards and manage them. Contrariwise, we came across an example recently with a local school. They had had solar panels installed, probably as part of a building project by a commercial entity that had then more or less walked away. They asked us, "Come and have a look at them because we think they're not working as they should." It is difficult to track back, but we estimate they stopped working three years ago. Nobody knew, nobody cared, and it was not anybody's job to fix it. With community energy, that is inconceivable. We monitor the performance of all our projects almost 24/7. That is an example of community energy being in long-term partnership with our community hosts. That is one way in which we make a difference.

I will briefly reiterate the other things I have talked about. Because we invest for 3% of whatever it is, with very low overheads, we maximise the savings that can be passed back to the hosts. We also build up our community funds. Others will have larger funds than we do, but we put money back into helping those in fuel poverty and also into community education. We are getting involved in a pre-COP event in the autumn, which again will be all about engaging local people in the practical aspects of the transition towards net zero. That has to be done locally. We know that that works. Community energy is a unique vehicle for that ongoing engagement with the local community.

Q56 **Duncan Baker:** Absolutely. Thank you for that. I was going to ask how community energy can contribute to social change, but I don't want to ask that because I think all three of you have demonstrated it in abundance, so I will finish by slightly moving off transitioning from there. Dan, I am conscious you want to come in next. Where specifically are the educational benefits? We have talked hugely about the social benefits, and certainly the wider benefits there, but can community energy have more specific educational benefits as well?

Kayla Ente: We have just completed the almost complete decarbonisation of a school in East Sussex. It was off the gas grid, so we removed an oil tank where it was using about 20,000 litres of oil every year. It's a school that educates children from the age of four to 18, so it has a nursery, and there is one building with solar heat pumps and underfloor heating; the children play on a floor that is heated by the heat pump. Then, in the main building, we put in underfloor heating and solar panels, and we have just put in a ground source heat pump system. Now, we are working on a way of getting the data to the school governors, so that the kids can have access to all the generation data from all the equipment and use that. They are going to be using it actively in the education programme.

What we have found, in working with children and in schools, is that the children have quite a bit of anxiety about climate change and what is going to happen in their future, but having an active role in understanding these technologies and what a difference they will make to the climate helps a lot with the general wellbeing of the children in these schools.

Q57 **Duncan Baker:** That is very clear. Thank you, Kayla. The question about wider, educational benefits is to Dan as well, please.

Dan McCallum: I want to repeat Philip's earlier point about some solar projects not working on sites. We found that, certainly when we were doing a lot more of the Egni installs. Also, sometimes regulations were not making the best use of the resource. We came across a number of schools that had installed really small solar systems, not making full use of the roof, and they were doing that just to meet building regs or some sort of energy standard for schools. It was sad to see that we weren't making the best use of roofs in order to tick a box on the planning application form.

To come back to the educational side, we take lots of groups up to see our wind turbines, but I will also highlight, and I mentioned earlier, the work

of Energy Sparks. They are a charity, and I think that one of the themes that runs through the community energy sector is the fact that it's not for profit; that is defined by the legal status of the entities that are involved: charities, co-ops, etc. They have a really good energy portal that is working in England and Scotland, and we have now worked with them to expand it into Welsh schools.

I would really like to see that rolled out across the UK, because there is no commercial interest in it and it's all completely transparent. Everyone can see the data, the consumption of the schools and, most importantly, what changes they can make, and that that change can be driven by the children and integrated in the curriculum. It's really good. So, educationally, I would like to see that rolled out, and certainly, within Wales, for it to be available in the Welsh language as well.

You mentioned earlier that some of these ideas are innovative. We need fresh young minds to be engaged in this sector to come up with these sorts of innovative idea. The reason I have been doing this for so long—about 20 years—is that it's so exciting and changing, and it involves so many different aspects, so I think that if we can, we need to engage young people in it.

One concern I do have is that, in England, the Department for Education has been holding up leases on community energy roofs for solar power, and talking about a national procurement framework. Egni has been able to work with local authorities to get solar on, and we have not had to ask permission from anyone within the Welsh Government, so I do not understand why that is happening in England. Procurement worries me—that it will be set up in such a way that does not enable community energy to take part, which will be a real shame because of all the added value we have talked about.

Q58 **Duncan Baker:** Thank you, Dan. That is useful to know. Paul, my final question is about your input to the specifics of what educational benefits could derive from this.

Paul Hallas: To be honest, my colleagues have said pretty much everything of note that needs to be said, except maybe to reiterate that there is a huge amount of energy and hidden resource available in community energy. It is that kind of passion and enthusiasm that we want to communicate to others in the community. I have talked a couple of times about our schools projects this year, and we are really excited about the opportunity to build on that from an educational point of view with the schools and kids. I know that the schools are keen to use all this and build it into the curriculum, as Dan has been saying. Net zero doesn't depend on old fellas with grey hair like me; it depends on the next generation. That is what is so exciting about it.

Duncan Baker: Thank you very much. I really enjoyed that final question. I was right to think that it would leave us on a high note.

Chair: Thank you very much, Duncan. That concludes our second panel on

the subject of community energy. I will echo Duncan's comments there by thanking our panellists Kayla Ente from Brighton & Hove Energy Services Co-op, Paul Hallas from SE24, and Dan McCallum from Awel Aman Tawe. Thank you.