PENSIONS FOR PURPOSE PODCAST TRANSCRIPT
THE WIDER OPPORTUNITY SET FOR ENERGY TRANSITION INVESTING WITH LCP - S2 EP18

Laasya Shekaran, Pensions for Purpose: Hello everyone, and welcome back to the Pensions for Purpose podcast. I'm your host, Laasya Shekaran, and on today's episode we're going to be talking about the energy transition, focusing on the wider opportunity set that exists in this space.

We'll be getting into the current and future policy environment, and we'll be looking at the demand side of the energy transition.

I am very pleased to be joined by two brilliant guests today. We have Sam Hollister, who is the Head of UK Market Strategy at LCP Delta, and Stephen Harkin, who is the Head of Client Engagement Strategy at LCP Delta. Sam, Stephen, it's really great to have you here with us today.

Sam Hollister: Brilliant, thanks so much, Laasya. I'm really pleased to be here.

Stephen Harkin: Hi Laasya, I'm delighted to be here.

Laasya Shekaran, Pensions for Purpose: Great. So, let's get straight into it and let's start with a bit of scene setting. We know that when we talk about energy transition, the policy environment becomes really important. So, what is the general outlook with government and energy transition, and in particular, how is Clean Power 2030 – that buzzword we hear coming up – how is that actually going?

Sam Hollister: Right, a lot in there for that question. The idea being, if you rewind back to the general election, we're in a very different place than we were then. Labour came in with very strong clean power targets. They set up these new institutions like GB Energy. They've allocated more funding to the National Wealth Fund. They unlocked some barriers within onshore wind and solar, which got development going. They made some great appointments, like Chris Stark to lead the Clean Power mission.

At the time, we were almost riding the crest of this wave of net zero and positivity. It's worth thinking back that it was under the Conservative Party, who also had very strong clean power targets; they weren't quite as explicit as Clean Power 2030, and they were talking about decarbonising power by the mid-2030s. This view of Labour coming in was building on what was already there and established. It's probably been the last 12 months, ridden by high energy prices, challenges around networks, challenges around deployment, that's probably giving everyone a little bit of a pause for thought at the moment.

You're hearing the party conferences; the Conservative Party coming out and talking about repealing the Climate Act and Reform talking about stripping back any support for renewable power. Whereas, Labour and the Liberal Democrats have that kind of longer-term view that we're on this journey to lower bills, cleaner energy, better customer solutions, and to draw back from it now would be a terrible mistake. We actually need to go further and faster over the next five years and reap the benefits in 2030. It's definitely an interesting time at the moment, that we're seeing those policies and politics play out, that we probably didn't see 24 months ago.

Laasya Shekaran, Pensions for Purpose: Yeah, it's interesting. The idea of repealing the Climate Act, I think, seems quite scary to our listener base, who are mostly people who are

thinking quite long-term, about what will the long-term impact of things like climate change be on pension assets, and repealing the Climate Act will not be good for that. But then, as you say, in the short term, there are many challenges that we have to be real about with net zero.

It's interesting, actually, reflecting on the fact that the general election wasn't that long ago, but things have changed quite a lot since then. So, what do we think is going to happen going forward, in a year's time, or perhaps even more than that when it comes to the next election? How do you think the policy environment might evolve, especially if the government that we have in place does end up being a bit less convinced about net zero, or a bit less strong on it, let's say?

Sam Hollister: Let me come back to that in a second, the longer term, because of something you mentioned about things to look out for in the shorter term. Your members and listeners should be thinking that the next big milestone is that we have the Contract for Difference (CFD) Allocation Round happening in this period. We're in the process at the moment of people submitting applications, and for people that aren't aware, the CFD round is the main support mechanism for things like offshore wind, onshore wind and solar.

I would say the next three months are quite critical for that journey to Clean Power 2030. The government, as everyone listening will know, have got huge ambitions for growing offshore wind and always making that the backbone of the power system. Again, just reflecting on your point before, it was Boris Johnson who spoke about Saudi Arabia, and us being the Saudi Arabia of wind, so lots of support at that point in time. We think we need to build about 15-20 gigawatts of offshore wind in order to meet Clean Power 2030. We've got about 14 gigawatts installed currently. So, we're talking about trying to build that again, if not even more in the next five years. Given how long that will take to build, you really need to be agreeing these contracts and these support schemes almost this year and next. That's the deadline for the Labour Party to purchase enough offshore wind, which means that we need to see quite a significant budget rise from what we saw last year.

Last year's budget was about $1.5bn. We think that you probably need to double that if you're going to be buying the 10 gigawatts. Let's say if you need to be buying 20 gigawatts of wind over the next couple of years, you need to make sure you're buying at least 10 this year, if not, maybe perhaps a little bit more. So, I think for listeners, it's probably the end of October, early November that we'll be hearing that kind of budget announcement. I think the reaction to that will be quite strong. If Government is serious, it should be backing this with quite a significant sizeable budget.

They've also extended the length of these contracts. These contracts were 15 years for an offshore wind developer. It's a fixed price contract for 15 years. They've extended that to 20 years to try to encourage more people to be building and to apply for these contracts. They've relaxed some of the processes in order to make sure that there's enough projects going forward. So that's probably the short-term, what we really need to be keep an eye out for and probably people will see the reaction on LinkedIn, or wherever people are engaging the reaction as to whether government are putting their money where their mouth is, I suppose.

Laasya Shekaran, Pensions for Purpose: Yeah, and on the budget, if the budget does rise, what do you think will be the perception of that? I think one of the biggest challenges we hear against energy transition and net-zero energy, renewable energy is – and I don't know if it's true or not – that it's going to be too expensive at a time when energy bills are already expensive, and that it's money that we can't afford to spend right now. Do you think there's a risk of that, and is that a misconception?

Sam Hollister: Yeah, this is probably a good point to bring Stephen in in a second, because he's focused more on the customer demand side. But, from my viewpoint as the power system, there is no doubt that if you model out a power system in the 2030s, which is something that we do at LCP, there are different mechanisms at play that are worth bearing out. One is that the cost of power from a wind farm or a solar farm is cheaper, right? The wind is free, the solar is free; your costs are your upfront CapEx costs. What these contracts try to do is to smooth out and de-risk those projects, and we've seen lots of investment into this space, but the UK system still has gas setting the price in our electricity system which is a very odd concept; even if we could be producing 90% of our power from renewables and from wind and nuclear, and you've got one gas-fired power station on a system, that one gas-fired power station will be setting the price in the electricity system for every single generating unit. So, as soon as gas is on the system, it is setting the price for everybody.

The idea from looking out to the 2030s is that you reduce the reliance on gas, and you reduce the number of times that gas is setting that price. So, when Labour come forward and say, we're going to reduce bills by £300, what they mean by that is, cheap renewables will be setting the price and actually gas will be basically off the system. You won't really be using it in a clean power scenario. Therefore, you should see prices fall. The challenge is, for the next five years, we're both buying renewables and all of these costs get put onto customer bills. None of this is paid for from general taxation, this is all paid off customer bills, with the promise that in five years your bills will be cheaper.

Our modelling has said that actually, even if gas – and even the Clean Power 2030 scenario has gas still running sometimes, because we know that when the sun's not shining, the wind's not blowing, etc, we need something to provide power, and gas will do that – it will only provide five per cent of our total generation over the year. But this does mean that gas-fired power stations will actually be running, and there'll be at least one gas-fired power station running, I think, for one in every three hours – so about 33% of the time. So, even in 2030, gas is going to be setting the price one-third of the time, and then we know that's the risk of being exposed to international gas markets.

We don't quite know what's going to happen in 2030, but what I would say is that a renewable power system should reduce your reliance on international gas prices, and that's almost a bit of a safety net and insurance view in my space as well – not just about bringing bills down, but maybe making bills more stable. As for the customer side, perhaps that's probably one to bring Stephen in for.

Laasya Shekaran, Pensions for Purpose: Yeah, Stephen, it'll be good to get your perspective on that, because it sounds like maybe in five years, things will fix themselves, but in the meantime, how would customers feel if they see their prices going up? It would be good to get your perspective on that.

Stephen Harkin: It's a really interesting question. It's a big challenge for the whole electrification, decarbonisation piece, certainly of the demand side, where right now with high energy prices, customers are really stretched. They haven't got as much spare cash flowing around, and to decarbonise the demand side, it's going to require quite a lot of investment or expenditure to get low-carbon, cleaner technologies into people's homes and buildings.

The technology's already there – electric vehicles (EVs), heat pumps replacing fossil boilers, solar photovoltaic (PV) systems on rooftops – but all of these technologies are still relatively expensive, and in an environment where people are struggling to heat their homes or keep the

lights on, etc, it's a big ask. I think anything that can help stabilise energy prices or bring energy prices down will be a really positive thing for customers.

That might be a few years off yet, but what we are seeing is energy retailers are really trying to innovate the tariffs and the propositions they're offering to customers. So, in a world where energy prices may be volatile, we're seeing more fixed energy tariffs and flat energy tariffs. There's lots of dynamic tariffs as well, but there are options there for customers to try and have a bit more control and stability over energy costs. But, that energy cost is only one part of the puzzle: there's still all that capital cost of the assets that need to go into homes as well.

Laasya Shekaran, Pensions for Purpose: It's good to hear that that innovation is happening. I think lots of people probably don't realise that. Going back to what you were mentioning about EVs and heat pumps, a lot of the discussion that we have when we talk about energy transition is about renewables and low carbon, and specifically when mainly pension schemes are thinking about investing in the energy transition, that's often where the focus is. But actually, a big part of transition is also going to be reducing emissions in people's homes. How is that going? How much progress are we making in that perspective?

Stephen Harkin: I'd say it's going more slowly than the market would like, and policymakers would like. Annual sales of EVs, heat pumps and solar PV across Europe is in the hundreds of thousands of units per year, so it's a sizeable market already.

If we take heat pumps as an example, across Europe, the sales are quite far behind where lots of projections and policymakers have hoped for it to be. In the UK, I think the Committee for Climate Change was suggesting we need 600,000 heat pumps per year to be installed. We're miles off that. The early 2020s were quite a good few years for EV deployment and heat pump deployment. Obviously, since the cost of living crisis, sales of EVs and heat pumps have gone down, so it's been quite a tough few years. As I mentioned, that's due to high energy bills, so customers can afford to do this less. It has been a really challenging few years for the industry. We've had lots of the manufacturers of EVs and heat pumps have invested heavily to scale up production, getting ready for big market growth.

At the same time, their sales have gone down, so they're having to reposition and reprioritise. What doesn't help as well is, let's say, policy over the last few years has certainly weakened, sometimes gone backwards or watered down a bit. So, we're seeing subsidies to offset some of these high upfront costs being pulled back a little bit in some markets. I'd say most of the focus of policy is around new builds. So to build new houses, you need to include either maybe some solar PV on the rooftop, an EV charging point. In some new builds, you have to include heat pumps – but again that creates some challenges for the house builders. Again, they're trying to build houses as cheaply as possible. So, again, policy's trying to help where it can, but I'd say sometimes the changing policy environment, where policies get pulled back a little bit, it knocks the confidence in the manufacturers and knocks confidence in customers as well. While policy's a good thing, if it's not stable, it can have quite a negative impact on the transition.

Laasya Shekaran, Pensions for Purpose: Yeah, that's so true. I just got an electric car a few weeks ago, and it's the best thing ever. I'm such a big fan. But the car we got was cheaper because of a government grant towards it, which definitely was one of the reasons why we actually went for it. I've probably been thinking about it for a long time, and now I've finally taken the jump, I'm like, ‘this is the best thing ever, it's so nice to drive,’ but sometimes you do need that policy support to actually get there.

Stephen Harkin: It is, and things like salary sacrifice schemes are great. EVs can be several tens of thousands of pounds per unit. These salary sacrifice schemes make it much more easy for customers to engage with it, but for things like heat pumps, we haven't quite got those similar schemes. In the UK, there are grants if, where you swap from a boiler to a heat pump, you can get a bit of money off that, but again that's only a small part of the overall price. Installation of things like heat pumps can be complex. It's becoming easier, but again, there are still some challenges that the industry's working through.

So as I say, the technology is here, but the challenge is still around some of those costs and getting it into people's homes. But, we are seeing real innovation; there are some really interesting companies developing really interesting propositions on the market, so companies like Octopus Energy in the UK, where they've got a zero bills home proposition. I think that's targeted for new builds, but that's where in new build homes, you'll get a heat pump, EV charger, PV on the roof, by allowing Octopus, to control a little bit the operation of those assets, they're offering customers basically zero energy bills. So, it's really interesting, really cool propositions like that, that requires customers giving up a little bit of control of their assets, and that in itself is quite a big step for customers: why should I allow an energy company to control assets in my house? I want my car to be charged when I need it. I want my house to be warm when I want it to be warm. So, giving up that control is still uncomfortable for many customers, but what an amazing proposition, right? Here's EV charging, solar panels and a heat pump. It's lumped into the, I guess, the mortgage of the house, but effectively, the customer doesn't see that upfront cost, and you've got zero bills afterwards, which is a really great proposition.

Something else to add to this as well is, in the last couple of years, we're seeing, I guess, a new development in the market, which is residential flexibility, or demand-side flexibility. This is where companies are bringing together lots of electric loads in people's homes and controlling them to provide flexibility services to help balance the grid. So normally, that balancing would have been done by a flexible gas generation plant or big grid-scale batteries, but now we're starting to see companies bringing together loads of assets on the demand side to provide those same services.

Laasya Shekaran, Pensions for Purpose: What does that mean? I don't really understand. What's an electric load.

Stephen Harkin: That's your EV, or your heat pump, or it could be a battery in the house. It's a big electrical load which you're able to, let's say if there's too much, if there's excess renewables on the system, if you can turn them on, you can absorb some of that. If there's not enough generation on the network, you can maybe reduce either the heat output of your heat pump, or maybe pause the charging of the EV for a few minutes to support the grid. What we're seeing is companies now starting to try and aggregate lots of these assets in people's homes to provide those flexibility services to the grid. They generate some revenue from that, and they can share some of that revenue with the customer.

We're starting to see companies offer that kind of proposition, where if you allow me to influence the operation of, and control some of your assets, we'll pay you, we'll give you some money for that as well. It's a really interesting development, where demand-side flexibility is really becoming a very interesting topic. It's another way that companies can generate some cash that they can potentially share with customers to help make the transition a bit more easy and attractive for customers.

Laasya Shekaran, Pensions for Purpose: It sounds like there's actually loads of innovation going on, and it's interesting to hear that a lot of this is related to things like housing, residential,

new builds, because that is an area that the pension schemes world is investing quite heavily, especially at the moment, given there's quite a big focus on investing for local impact and we know that one of the biggest government objectives is to build more housing. I do wonder if the pensions investment community could think more about prioritising investing in new housing that is aligned with some of these new initiatives. I'm not sure now if they're joining up thinking about the real estate part and the energy transition part of that portfolio, but clearly there is a lot of overlap there.

Stephen Harkin: No, there isn't. Even at the Energy UK conference last week, I was having a few conversations. There were some real estate players there trying to understand how they can bridge that gap between the real estate world and the energy world, to try and simplify propositions to help decarbonise real estate, and get capital flowing in to help fund. As I say, there's a huge amount of asset that needs to get deployed on the demand side, and we're seeing lots of companies trying to develop financing propositions for that, or find ways to get capital to flow in to cover the cost of some of this infrastructure; or we're seeing quite a bit of activity around investors investing in companies that are developing some of these really interesting solutions and propositions. There definitely is a need for that flow, and we're starting to see some companies trying to bridge that gap.

Laasya Shekaran, Pensions for Purpose: It would be great to engage; there's so much capital in the pensions community, and it's long-term capital that wants to be sustainable, that wants to focus on the UK. It makes a lot of sense to bring the pensions world into this, although I would say that, because I love the pensions world and I think we're the best.

We've talked a bit about some of the opportunities that exist for investors, and how that goes beyond just direct renewable energy, or even grid and storage. Are there any other key opportunities that we should be raising with our membership, and that the investment and pensions world should be thinking about?

Stephen Harkin: I'd say around the residential space, district heating. In some countries, it's deployed massively. In other countries, including the UK, it's quite a small part of the overall landscape design.

Laasya Shekaran, Pensions for Purpose: What is district heating?

Stephen Harkin: District heating is where you might have a big boiler or a big heat pump generating heat centrally, and then you've got a network of pipes that are carrying hot water to people's homes; so, instead of a network of pipes carrying gas to homes, or electricity wires carrying electricity to homes, you can have a network of pipes carrying hot water or heat to homes. Basically, you have a big centralised heat generation system that feeds and conserves loads of homes or blocks of flats or apartments, for example – that's district heat.

It's a big infrastructure play, so it requires digging up grounds, laying pipes, connecting to lots of homes and buildings. I think that is a big area where it's capital intensive, with long returns, so I think it fits that investment model quite well. It's always been on the agenda, but it's quite tricky to deploy. It's quite disruptive, but again it's part of the solution and I think that's an area where if more investment was going into that, that could help accelerate that piece of the puzzle.

We're seeing a lot of interest from the investment world in the EV charging space as well. Obviously, there's lots of charging points, whether they're in people's homes, public charging points on the street, high-power charging solutions at service stations of the future. Again,

that's a lot of infrastructure that needs to be deployed, and we're seeing a lot of the investment interest in that area. How can they acquire a network of charging points, or investment in those companies deploying those networks as well? That's just two areas where probably there's a lot more investment that needs to flow into that space to help accelerate that.

Laasya Shekaran, Pensions for Purpose: Yeah, absolutely. It seems like there's lots of capital needed in lots of different areas, and we need to find a way to make it attractive to different investor types and suitable for their requirements.

Are there any other key structural changes that you think that we would need, or that you'd like to see to help support energy transition? Particularly on the capital side, given that's an area of focus for our membership base.

Sam Hollister: I think Stephen has done a brilliant job of describing some of the customer propositions and how people will get involved with this. I guess it almost reflects back on that first conversation that you and I were having, Laasya, around the politics. It does feel that we're on this path of renewables.

We are on the path of the need for storage and flexibility. Even if we repeal the Climate Act and stop building renewables today, 70% of our generation is still low carbon. Let's not think that we're going to suddenly go back to burning coal and bits and pieces. We're not. A lot of the debate is around the role of gas, or how far do we go. I don't want any of your members to think, actually, maybe I should hold back on this, because maybe it all changes. I think we are on a path – and I don't want to say an unstoppable path, right, but people are not going to start ripping down wind farms that have already been built, for example. Well, I certainly don't think they are, but then there's your question: what other things are we looking for, and what are some of those trigger points?

To give the listeners some of the ideas, one of the things that I mentioned earlier was around the fact that all these costs are put on people's bills. That is a reason why electricity is actually quite expensive, because we're actually paying for a lot of the decarbonisation of the electricity sector through electricity bills. It feels a little bit perverse, because you're now making electricity bills higher in order to make them decarbonise. From an economics standpoint, you should be taxing the bad product. There is a conversation around, can we switch those costs and start to put the tax on gas? That might unlock more of the things that Stephen was talking about, because suddenly your electricity bills are 15%, 20% cheaper, and maybe it's actually more expensive to be running a gas boiler than it is an electric heat pump.

That, however, comes with a real political challenge. Do I really want to be taxing gas? You can just read the front page of the whatever daily newspaper you want to, and turn around and go people are unable to heat their homes, because we've started taxing gas, etc. There is a real political challenge, but I think it will be overcome as more of these solutions that Stephen was talking about come to market, because we've got this great electrification; we've got the need for demand-side residential flexibility; people coming forward with solutions and you always hear people saying, "I can make people's homes warmer, bills cheaper and lower carbon if actually the government was able to unlock better financing, or better customer demand". I think that is probably where the stories and the narrative will go.

As for some of your listeners looking for decarbonising, Stephen mentioned quite a few areas. One area we're doing a lot of work on is long-duration energy storage at the moment. People would have heard about batteries, and they can provide power for one, two, maybe four hours. We're talking about can you store power for a day? Typically, they tend to have a few of these

pumped hydro plants in Scotland, for example, where you have a reservoir, and you let the reservoir flow and it generates electricity, and then when electricity's cheap, you push the water back up the hill and let it go, and you can generate power for multiple hours.

The government recognises that we need a lot of this stuff if we're going to have 50 gigawatts of wind on the system. We might not have wind for a day or two days, so what's going to produce power at that point in time? So, things like long-duration storage, which is large infrastructure play, long contracted revenues: the sorts of things that your members will be looking at. The people that are investing, or looking at the propositions that Stephen is talking about is, can you turn these into an infrastructure type of solution, where you've got contracted revenues? On Stephen's point there, who are you contracting with if you want someone to put an EV and a heat pump and a solar panel on your roof?

The risk there is that, actually, when I move house in a year's time, that's a problem, right? So can I actually put that contract into someone's mortgage, or onto the house, or pay for it through council tax, for example? I don't know, there's lots of conversations about prices, but there are probably some of the things that I think your members will be looking at; how can I make this more infrastructure and long-term contracted revenues, rather than people literally playing in the day-to-day market of how do I maximise my profit today in order to balance the fact that the sun's out shining, and therefore prices will be cheap?

Laasya Shekaran, Pensions for Purpose: Yeah, absolutely. I think you've hit the nail on the head. That's exactly how most of the pensions community will be thinking about it. This has been a really fascinating conversation. It's so interesting to hear about the policy environment and how that's evolving, but also just how much innovation is going on in the market. Obviously a lot of capital is needed, but it seems like we could be getting to a place where there are some really good, investable opportunities for the pensions world.

Before we close off, perhaps I'll come to each of you and just ask if there's one last thing you wanted listeners to take away from this discussion, what would it be? Maybe Sam, you can kick off?

Sam Hollister: Look, this is a long journey. The politics has changed quite a lot in the last couple of years. Even if you tell me that Labour don't get anywhere near Clean Power 2030, and there's a very strong chance that they don't actually meet the targets they've set themselves, it will be a very heavily renewables, very heavily decarbonised power system over the next two or three years, because of the activity that's happened over the last ten years, and will be happening over the next two or three. Even with the external noise, this is the transition. We might debate how fast it goes, and there might be bumps along the road. This is very much the road that we're going on. There are strong economic narratives as to why we should be investing in renewables and the decarbonised economy.

Laasya Shekaran, Pensions for Purpose: Absolutely, and Stephen, the same question for you. What's one thing you'd want listeners to take away from this discussion?

Stephen Harkin: I'd say that on the demand side, the technology is there and it's ready. I think the challenge is, we need capital to come into the space to enable very low upfront cost offerings for customers, or zero upfront cost offerings, like the Octopus proposition. We need more of that to enable customers to really get behind this and get on board with it.

One thing I would say, though, is that there's still a challenge, just around really simplifying all of this for customers. It's a complex topic. Once you start getting into explaining flexibility, or how

a heat pump works, customers are lost. I'm hopeful that the propositions being offered by these cool innovators will simplify, and become really simple and compelling for customers, but I think we need that capital flowing in and to simplify that pitch to customers.

Laasya Shekaran, Pensions for Purpose: That's what you do though, right. You'll make it simpler?

Stephen Harkin: We work with these companies to help them simplify their propositions and really nail how they get this through, but we tend to find ourselves talking to engineers that talk about how brilliant their solution is and forgetting what the problem is it's trying to address, so there's still a lot of work to do there.

Laasya Shekaran, Pensions for Purpose: Yes, I think we see that in investment world when we talk to pension scheme members too. I think every industry has those challenges, but yes, brilliant. It's been so good to have this discussion. Thank you both for joining us today.

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