

# Energy Data Project – The Interviews

2017/12/15

As part of the ODI Leeds Energy Data Infrastructure project, one of our key objectives was to engage with energy stakeholders within Leeds; better understanding their drives, desires and intentions when it comes to the city and energy data. I would like to thank all those who took the time to speak to me as part of the project, having these conversations are vital in establishing how people from different parts of the city can work together. If the goals and targets of the Leeds Climate Commission are to be achieved, then it will take both cooperation and innovative collaboration between different actors and sectors within the city. Hopefully these interviews will represent the start of more conversations leading to the uptake of bigger and better energy projects in Leeds.

As these conversations form part of an Open Data project it is only right that they have been made open for viewing. I would like to thank the interviewees for allowing me to record and transcribe the interviews. In addition to the transcriptions, this document also includes the questions which formed the basis of the conversations – given to the interviewees before they took place.

1. **Tom Knowland** – Head of Sustainable Energy and Climate Change (Leeds City Council)
2. **Rob Greenland** – Codirector (Social Business Brokers)
3. **Luke Gallagher** – Energy Manager (University of Leeds Estates)
4. **Jacqui Warren** – Head of Energy and Sustainability (West Yorkshire Combined Authority)



## Questions Framework

A quick overview of what you currently do and what your interests in energy are.

1. The launch of the Leeds Climate Commission indicates a defined, city-level drive to meet climate change targets. With this in mind, what would your long-term view for the city be?
2. In your opinion, do you think your vision of the city is an attainable one; considering the provisions, support and desire (at a national level) that are currently in place?
3. If not, what do you feel is required to achieve this?
4. Considering the long term goals/aims of your organisation, how reliant are you on data to achieve these? Could these be aided with an increased access to data?
5. What kinds of energy data – or data relating to this topic – would you be particularly interested in being made available?
6. What challenges are there surrounding energy data?
7. What do you feel could be done to combat these challenges?
8. What's your opinion of ODI Leeds desire to produce the best city level energy data infrastructure? Do you believe there's a need for a centralised hub of accessible energy data for Leeds?

Interviewee: Tom Knowland, LCC, Head of Sustainable Energy & Climate Change

Interviewer: Douglas Phillips, ODI Leeds, Project Associate

Place: Munro House, 3<sup>rd</sup> Floor, ODI Leeds Offices, 28/09/17 10:00am

**DP:** The launch of the Leeds Climate Commission indicates a defined city level drive to meet climate change targets, with this in mind what would your personal long-term view for the city be?

**TK:** Gosh, well I think it's pretty much, I mean, I think the city council has set out what it's trying to achieve and the commission is hopefully another way of us helping to achieve it. I guess what we're trying to achieve is more low carbon energy projects in the city, better low carbon energy projects in the city; ones that help to retain the investment or give a better social return – be that better health or whatever it is. Where they start to stray to other issues apart from energy generation, that have an impact on transport, through to air quality, and a more efficient city that runs more effectively and efficiently. And reducing things like fuel poverty at the same time and, associated with that, although not directly relevant to this, is better adaptation to climate change. I think personally – so that would be the city councils view – {laughter}, which I don't disagree with at all, I guess personally I would like to see all of that but with a slightly more radical edge to it. So maybe more community involvement. Less emphasis all the time on attracting big corporate investment, you know, so maybe more about; how could we do some of this locally? How could we do some of this, accepting you won't be able to do everything small scale, but just not losing sight that we don't have to constantly talk to everyone just because they've got a big cheque book. If we can make it easier for some of this to be locally owned, locally shared, more beneficial I think. But in a way, I don't think the city council would disagree with that at all, it's probably more a sort of balance I guess between the two.

**DP:** So, I'm guessing there is quite a unified vision within the council, obviously with the Leeds climate commission – I'm guessing it's sort of promoted through the council?

**TK:** Yeah, yeah, I mean it's pretty cross party which is great because I mean, ok, Leeds is a strong Labour authority but on this issue we've had cross party support; so Conservatives, Liberal Democrats and the minority parties as well. There are a tiny minority of councillors who are not very interested, but the vast majority get it. They might not be that fused about climate change, they might be much more concerned about creating jobs reducing fuel bills, making businesses more competitive, attracting new businesses into the city, creating jobs for people in the energy sector and so on, but that's all fine, you know, if that's what floats their boat then that's grand. And the commission I guess was part of a recognition that, as the city council has got smaller, we have a lot of capacity to do some of the thinking about this. And it's a complicated subject, if it was simple {laughter} you know, we wouldn't have to worry too much about it. It's not simple, it's complicated, there are technological complications, there are economic complications, there are social complications, and we have absolutely no statutory role in this at all. There's no piece of legislation that says, a local authority X must produce Y. It just doesn't exist, it's not like we've got a massive sort of statutory right to take this role, so we know that we need to work with lots of other organisations to help us achieve it.

**DP:** Yeah, has there been quite a lot of positive feedback since the launch?

**TK:** Very much, yeah, yeah. It was really really good actually, loads of really positive comments on twitter. It's interesting doing it through the commission because partnering up with the university means that they're doing a lot of the heavy lifting – when it comes to managing all that kind of stuff – so they're receiving all the comments. They're not coming flooding into my inbox which is nice for me, but they've received inquiries from other cities saying, “you know, how can we do what you're doing,” that kind of stuff. Lord Deben, who gave the keynote speech, chair of the national committee on climate change, he went back to London and was apparently really enthused about what's going on. So yeah, I think like all these things you can launch but you've got to {inaudible} you know. The university produced that research, showing the low-cost carbon measures. For that research to really have an impact, which is how they are judged now, you know, what difference does their research make. For your research to have an impact it's got to lead to implementation so it's good that they have sort of recognised that and said right, how can we actually help in that implementation.

**DP:** Well, sort of following on from that implementation then, do you feel that vision that you outlined and the vision of the council, do you think that there's provisions in place for that implementation, maybe from a national level? Sort of filtering down, do you think there's enough support then?

**TK:** No. No. I think for the city council, we are concentrating our resources on the projects that we can lead and deliver most effectively, so those are some of the things that we've mentioned. So the district heating, very hard for any other organisation to lead that because it's a kind of lost leader you know, someone's got to take the first steps. So were doing that then, we own a lot of assets in the city so we're doing our bit around those assets. We're doing things like, the gas refuelling station, things like that, and those are the things that we're well placed to do. But the report, you know, the report, the university showed there's numerous opportunities in the domestic sector, in the commercial sector and in the transport sector. A lot of those, particularly those in the commercial sector, we're not best placed to lead. But it's not entirely clear who is going to lead {laughter} so I guess that's an area where the commission can kind of move in and say, “there's a huge economic opportunity here, you know, how can we unlock this?” So maybe the city council just plays a role, kind of nodding {laughter} from the side. But yeah, I think, is it easy to do that kind of work? No, it isn't, because there aren't straight forward funding mechanisms, there aren't straight forward governance systems, there aren't a whole load of ready-made contracts that you can just roll out across the city. All of that we've kind of got to create for ourselves, you know, and I guess that's what one of the things the commission will try to do.

**DP:** Do you feel there's any sort of success stories already in place where we've done well or...?

**TK:** Yeah, yeah, I mean there are. So we've done very well on domestic in Leeds; we've attracted ECO funding into the city, we've made it easy for the energy companies to spend their money here. That's worked well but now it's dried up, so you know, we've got the structure in place though, so if there's another way of unlocking some funding we should still be able to deliver on that. But in the commercial and industrial sector, it's much much more sporadic. Are there success stories there? We know that there are organisations in the city who have done things, but whether they, I mean yeah, that's a success story, but I kind of get the impression that they're, you know, they're not the kind of

rule, they're the exception. It's not like we've learnt how to replicate those, they stand in splendid isolation rather than being, "right, this is how you do it, on to the next one" {laughter} yeah, so there's lots of stuff there

**DP:** Excellent. So, focusing this more now on the data aspect, we've covered the big picture, so would you be able to maybe outline the goals and aims of the organisation, from an energy perspective, from the council and then I can sort of take it on from there...

**TK:** Yeah from an energy and data perspective?

**DP:** Yeah from an energy and data perspective?

**TK:** Yeah, ok, so, I think we we've learnt in recent years that data is an enormously important resource for all of this work, because you can't make any decisions unless you've got some data to base them on. So, we have taken steps where we have data, particularly about our own energy consumption and our own estates and so on; we're anxious to get that out in the public, published. We could probably still do more, you know, we've published energy consumption data but I think there's still some delays in that, in actually getting that onto the Data Mill. But there's other things, like we could probably publish more information about our assets; where they are, what they are, how big they are, which way they face, all that kind of stuff. And we've probably got that data {laughter} so yeah, there's, I'm sure there's more that we can do, as an organisation. For the city I think this is where your project comes in, because if we can unlock the equivalent data for other bits of the city, so other organisations, particularly in the public sector where if anybody asks for them, through freedom of information requests, they probably have to tell them how much is your energy consumption. Wouldn't maybe have to tell them how much it costs, but they'd probably have to give them the volumes. So let's get it out there, you know, and similarly around those other things, like those assets around the city, because some of them will be big strategic assets. Like where the hospital is, you know, where the university is, the roofs, all that kind of stuff, where they could potentially play the role of (anchor loans?) all that kind of stuff. There's probably lots of that data out there and I guess what we're hoping, that might be one of the outcomes of this project is that more of that is unlocked, so that when it comes to developing new energy projects in the city, whatever those are, whether they are energy generation, or energy conservation, or whatever. That people can save a lot of time and effort {laughter} by just going to that data source, "right, we know all that, now what do we have to do next."

**DP:** Yeah, so you've sort of answered all my questions before I even got to say them... {laughter}

**TK:** {laughter} sorry about that {laughter}

**DP:** {laughter} Erm, ok, so, what do you feel, maybe from the councils perspective, what kinds of energy data – or anything relating to that, so emissions – that would be particularly interesting to be made available? Things that are probably there but isn't available at the moment, what do you think would be good to be made available?

**TK:** Yep. Well I think, I mean there are some things that I think we would like to get more widely accessible; so I've mentioned our energy consumption data, and I think there are still some hiccups in actually getting the data from our energy supplier on to the Data Mill North. But I don't know what's happened about that, but anyway, so that would be one thing. I think also using that data to develop, so we have some performance indicators which have, I've told you about and maybe we can talk about those later. I would like to get those PI's, you know, on a dashboard so that we can always point to the latest version of the truth and we can direct other people there and it makes us more accountable as a public organisation. It maybe starts to say "ok, well what other PIs or [data] around the city could appear on a dashboard, so like, how much of the city's energy is produced through renewables? You know, on a daily, monthly basis. Temperature data for the for the city, how many of the – what's the breakdown of you know buildings that are rated A B C D E F G? Whatever, that data is probably all there but it's not in one place {laughter} and it's not on a nice easily accessible dashboard. People like me, we know that this data is valuable, but it's like asking me to tell you how my car works, I haven't a clue. I'm just interested in what it does you know. So getting it on to dashboards, and visual representation, so that people can actually see and understand. Then other clever people can go and play with the data and do magic things with it, that's great. But I think, just in terms of getting that information, early engagement. I mean I know the university did some, they've got some research looking at how you judge solar potential or wind potential across the city. Great, let's get it on there {laughter} let's get it out there. So that if there's someone out there, a company or a voluntary group or whatever, who thinks they've got a way of making that happen, great, there's the data, now they can. Ok they might need to do a double check but they've got the basic, enough to get them going. I think it would be good to know about, I mean there are new things that – what about energy storage; how much energy that is being produced could be stored? Where and how is it stored? What other opportunities are there for us to see it like that? That's relevant at the moment because things like the solar project we've discussed, because the business model has all changed because of the FITs and so on. So, its suddenly made storage a more compelling technology and as the price of that technology has come down, it has opened up new opportunities. So, where as we in the council have said we can't do solar anymore because the FITs have gone and it just doesn't stack up, actually solar plus storage – maybe it does start to stack up again. And so we surveyed loads of our properties, we've got all that data, that hasn't gone off {laughter} you know, that's still relevant. If we could just publish that {laughter} make it available then we could. If someone says, "actually I've got a new business model", then we could just get those up and running quickly again, we could respond much quicker to these kinds of opportunities.

**DP:** Do you feel there's a role for the public to get involved in energy data? And I suppose with the dashboard it would be a very good way to engage, making it sort of...

**TK:** I mean you have to make the assumption that people are actually going to look at it {laughter}

**DP:** Yeah, yeah and that's the whole changing of behaviour and...

**TK:** Yeah, yeah. But at least it would all be there, you know. So I mean there's kind of two things there isn't there? There's something around publicity and then there's another thing about, does actually making that data available make any difference to people's behaviours or attitudes or whatever, and there's probably loads of research that one could do around that. I have strongly felt

when it comes to things like behaviour change, we have to be much cleverer about it. There are probably lots of clever people who could tell us how to do it better. And local authorities traditionally are not behaviour change agents, we are predominantly kind of technical lead, engineering lead, organisations. We can put in insulation, we can put in recycling systems, but actually publicising and engaging people and all that kind of stuff is probably not our strength. We need to get smarter at it, so if we are going to spend any money on that we need to be sure that we are spending it in the right way. There's probably people who can help us with that, but having the information there in the first place is going to be important whatever we do. Some people may be persuaded by seeing dashboards or whatever, I suspect that the vast majority of people couldn't give a damn, but maybe if their friend or neighbour talked to them about it they might. So, it's not going to be the answer, but it's a tool.

**DP:** Yeah, it could definitely help I suppose

**TK:** Yeah, it won't do any harm, it won't do any harm, definitely not

**DP:** And so, with regards to getting energy data out there and bringing it all together, obviously you've got your own data that you produce – what sort of barriers have you come up against that stopped energy data being made available, without being too controversial {laughter}

**TK:** No, no, no. {laughter} I don't think there has been any controversy. I mean I think there's been the purely technical thing; we buy our energy from ENGIE and we've got a piece of software that sort of talks to their software and all that kind of stuff and it seems to be some sort of blockage in the pipe, between getting the data from our datasets to the Data Mill North. {laughter} Someone will know how to sort that out, I know, so there's been that, but that's just a kind of bureaucratic barrier. I think all of our colleagues in the authority who are involved in trying to open up council data, they've all encountered the problem of the kind of cultural thing, you know like, "why should we publish this?" So, there's those barriers, that's not unique to energy though.

**DP:** No, no, not at all.

**TK:** {laughter} I think possibly people think we have more data than we do have, you know, a lot of the energy data is in the private world. Privately owned so we don't have access to it. So that's tricky, we also have to be careful about confidentiality. We do have, or we can have, access to the energy data if people tick the box – customers of white rose, which is our energy company. But we have to be very careful because then we would actually have individuals' details, so we'd have to be very careful with that. That's again not unique to energy, legalistic thing. We did do, we have got bits of data, out of date now, like aerial flyovers of the city in the wintertime doing a heat map, so that's a potentially very interesting data, but again you have to be careful, you know, you can't really just publish that.

**DP:** Yeah there are certain...

**TK:** Yeah, there are. Apart from finding out where people are growing marijuana {laughter}

**DP:** {laughter}

**TK:** You know, there are, which was probably its most useful {laughter} outcome actually. But yeah, but potentially, and I know some local authorities have ploughed in there and made it available, but I would have some reservations about that. We have to be careful about how we present some of the, but certainly – and following on from this interview Dougie I will put you in touch with my colleague Ivor – he plays around with domestic data, not necessarily energy data but building, housing types. You can map houses in the city that are graded D E F and G, worst performers, and they are grouped {laughter} they fall in geographic clusters, so you can present that without actually identifying peoples' individual addresses. You present it and think "Ooo my god", you know, that's such a fantastic opportunity. So, someone's in the business of installing insulation, and if at some point there's some sort of ECO funding available, then we can say "right, well we can target these areas", because that's where you are going to spend your money most efficiently and we're going to help the most people. So that's not directly energy data but it's about housing standards and there's probably other proxy energy sets which would be [available]. So, you know, have we got data on, I don't know, maybe we haven't got it but someone will have data on cold related illnesses, something like that. I think it's people realising that the data that they've got is valuable, is important and accepting that, that even though they can't see a use for it, someone else might {laughter} I can't really think, other than the flyover thing, I can't really think of anything that's unique to energy data actually.

**DP:** Yeah, I suppose 'energy' is a much bigger issue than just energy, isn't it? Same as with transport, it's not just about how many cars are on the road, it's the whole... it could be worthwhile having a framework for energy, yeah, it's definitely not a simple thing {laughter}

**TK:** {laughter}

**DP:** If there's one thing I have learnt so far, it's definitely not a simple thing. So, I suppose we should try and tie this all up – obviously ODI Leeds are looking to produce this best city-level energy data infrastructure, I'm guessing you believe there's a need for this? Do you have any comments relating to that? How beneficial do you think it would be to have that centralised hub, at a city level especially?

**TK:** I think having it all in one place is always very useful, you know, hoovering everything up and putting it in one place. I think working with ODI, then to say, "ok, then we maybe do some sort of event" and there's something about that wisdom of crowd, that activity, that we then unlock some opportunity that we hadn't thought of before. Or someone comes with a good question that the data helps us to answer, or someone says "actually, we've got some more data that we hadn't even thought of that would be directly relevant". So, I think it could be a catalyst. What I would want – success to me would be able to say we brought together the data, in the process of doing that and all the relationships that are created, it then leads us quicker to an actual project. That would be really, that would be the best thing, that would be the best thing. But anything getting in that

direction is good. We mustn't just be publishing this just for the sake of publishing it, but if it actually ends up in a project – ideally something with a difference being made in Leeds. That project could be a behaviour change lead project, it could be a game, that doesn't really matter. Ideally, it would be, we could then point to something, take a photograph of it and say this happened because we did this data project. So there, you know there it is, photograph it, we talk about it, that would be great. You can touch it and smell it and all that kind of stuff. But I appreciate that the process of getting to that is valuable in itself as well, because we don't know what other spin offs we might get from this. That's harder to kind of point to as a success, say we had a really good event {laughter} yes, or we made all these really good connections, right, {laughter}

**DP:** Yeah, it's taking that next step, isn't it?

**TK:** Yeah, yeah. We mustn't be satisfied with "we've got to know a lot of the stuff". We want it then to lead to something that we can point to. That would be good.

Interviewee: - Rob Greenland, Social Business Brokers

Interviewer: - Douglas Phillips, ODI Leeds, Project Associate

Place: - Munro House, 3<sup>rd</sup> Floor, ODI Leeds Offices, 03/10/17 9:30am

**DP:** I thought if we could just start, if you could just give a bit of a quick overview of what it is that you do and what your interests in energy are or, at least would be

**RG:** Yeah, yeah, no sure, yeah. So, I run a social enterprise called Social Business Brokers and basically the idea is that, we try to get involved in working with other people, to try and solve social problems, that's the kind of big thing, which is obviously quite a big thing, but we then try and focus on specific things and we've worked quite a lot on housing over the last few years, but at the moment we're looking at ideas around tackling climate change locally. Erm, so, looking at various things but probably the main thing that we're looking at is around opportunities for community energy schemes in Leeds. So, that's kind of, that's our kind of interest, so we're at the stage of just doing some quite broad research to try and work out where there might be opportunities for us or other people to do something.

**DP:** Excellent, so, that fits in really quite nicely with the fact that the Leeds Climate Commission [has] just been launched, and it indicates there's this defined city-level drive to meet climate change targets, which you mentioned there. So, with this in mind, what would your long-term view for the city of Leeds be like? How would you like to see it; either from the perspective of your company or maybe from your own personal perspective?

**RG:** Yeah yeah, sure. So, I mean I got involved with the commission a few months ago, because you know, beyond my work really, climate change is something that probably is the issue that I'm kind of most interested in, whilst also interested in from my work perspective. I kind of think there's an urgency to do something clearly on a global scale but I'm kind of interested in, in the opportunities there are at a city scale as well because I think it's one of those issues where it feels very difficult to know what to do and how to act, and it's also quite difficult to work out what the benefits might be of acting. It's often seen as a kind of negative thing, whereas I kind of think that if you can, if you can work out how to reduce your energy use, as a city that can have real benefits, you know, and all sorts of benefits in terms of you know, liveability of the city but also from a climate change perspective. But it can also make it a kind of better place to live, so I'm interested in what can we do at a city level to tackle this stuff.

**DP:** So ideally, would you from the community perspective, would you see lots of community projects popping up around the city, would you like to see that?

**RG:** Yeah, no. I mean I think almost by definition it kind of has to come from the communities themselves, do you know what I mean, but I think our role would be to try to help people see what the opportunities are and then whether it is you know, in terms of specifics around, kind of community energy schemes that generate energy, that you know, solar panels on community

buildings, or work with local communities to reduce energy use or to improve insulation of homes. I kind of think that we've got to take quite a long-term view of it, thinking well, this would be good for the environment but actually it's good for us for different reasons in terms of, for the city, for health outcomes for people, for fuel poverty, and that kind of thing. I think it's only one part of it, all the other stuff that is going on around big, you know, big energy users in the city doing stuff is really important too but my interests in getting involved with the commission was particularly around what, how to engage local people and how do we get local people doing stuff that that makes a difference in this city.

**DP:** So would you say, considering that larger scale view, do you think that is something that's currently attainable as things are? Do you think that there's enough resource and support in place for that to be achieved?

**RG:** Yeah, it's interesting because I mean, we're right in that, at the moment looking at how we might do it and we've got a little bit of money, our social enterprise are putting in you know, primarily to, for my time and a bit of, a bit of other stuff. But, it is noticeable how little support there is out there. So I'd looked at something yesterday and it was, what was it called, the urban community energy fund or something, and until 2014, that was a relatively easy £20,000 you could get, for early stage feasibility studies and all that kind of stuff, to basically do the kind of thing that we were wanting to do, you know, solar, or whatever and that, you know, 2016 that was cut by the government and, so, it's actually quite... That's one example of how it's got more difficult to do this kind of thing and just the whole, the whole kind of government you know, there's a kind of, the policy environment around green energy and community energy is a lot less than official, a lot less positive than it was even just two or three years ago. So it is more difficult, and I mean, this is the kind of stuff I do, it's never easy to do but I would certainly say that where we've made a difference, like with our energy homes work, there's small bits of support, and you know money is important, that can make a real difference. But then it also, and this is where I suppose we'll come on to data and contacts and that kind of thing, being able to find out other information is also important as well because you just, and I think you know, as I say we're at that stage at the moment thinking right ok, there's ideas here but you know what's the energy use of that building, what could we save and that kind of thing so there is erm, so yeah, it's doable but. You know I've done this stuff long enough now to not be under any illusions that it's, it's not easy and there are reason why. When we've got involved in this people have said, "oh why hasn't there been stuff on community energy in Leeds" and then you start looking into it and there's this group set up, it doesn't exist anymore, you know, they didn't actually make anything happen and another groups set up and it didn't make something happen and it's just because it's difficult, you know what I mean. So hopefully we will have more success but we might, you know, you never know we might not.

**DP:** What do you think would be, if one thing was to be introduced, say tomorrow, which would straight away make a difference, attaining that sort of big idea? Other than chucking tonnes and tonnes of money at it – what sort of thing do you think would drive that?

**RG:** Erm, yeah, I suppose the first thing would be to say the, other than money – I would actually go back to say, actually it is often about money. It is you know. We decide as a country that we're going to invest in and subsidise nuclear or whatever it might be. We could decide, actually, we've got a climate crisis and we want to do stuff, we've got to take a long-term view for 2050 and actually we need to start supporting, you know. I think other people understand this stuff better than me but

kind of local, you know local energy, local energy projects and kind of green energy processes, I think the money kind of matters, I mean, what else is needed, erm I think, again and it's not simple stuff, but it is about kind of policy, you know what I mean, it is about saying actually, this stuff is important, so we need to we need to get kind of policies, but then I suppose again this is why it interests me at a city level, I think you know I would like to see more, a, you know I think Leeds is doing some good stuff but, again, you know, we need to be doing more at a city level to say this stuff really matters, and we are going to do more to continue to reduce our carbon emissions, so again its, there's no magic one thing that would sort it, but it is you know, it is, some of the big policy and investment stuff matters as well as people getting involved locally.

**DP:** Yeah, it needs a consensus and a focus which I think is probably lacking...

**RG:** I think so, and a long term one because this is a thing that, that you know, it is looking to 2050 and that's really hard in a kind of political cycle that is only ever about the next 4 years, you know what I mean, you kind of...

**DP:** Yeah, communities last a lot longer than 4 years.

**RG:** Yeah yeah.

**DP:** Well, that's given a good overview there, and so, considering if you could put forward just a few, erm, what are the aims of your organisation, giving an overview of it, are there any specific goals...

**RG:** You mean, specifically around the energy kind of kind of stuff?

**DP:** Yeah

**RG:** Yeah yeah, I mean, the ultimate, the main aim and to decide whether to get in, we decided to get involved with this in the last 3 or 4 months, is this thing around local action to tackle a global problem, and recognising this, or kind of trying to build upon this idea that cities are the place where a lot of this interesting stuff can happen, so we've been – just to give a slightly broader context – we've been looking at erm, as I say our ideas around energy use, ideas around waste and recycling and ideas around transport, they're the kind of main three areas, and energy use is the one that has come up most, so we're kind of looking particularly at the community energy but then also at opportunities around insulation as well, we want to try to stimulate ideas, and also try to understand some of the stuff that hasn't worked, kind of in the past, again because you know if you look at, insulation work, you know there'll be a bit of government money and some stuff will get done and then it disappears and then a bit comes again, whereas if we want to, I think we're interested in trying to explore how we could, encourage the city to take a long term view on – and using insulation as an example – to say, we know that this could make a difference to the housing in the city, we know it could help fuel poverty, we know it could have health outcomes, you know people are living in damp homes and that kind of thing, so, let's work at a way to do that as a city for the

long term, so it's kind of trying to get, you know, I suppose on a microlevel get involved and hopefully setting something up ourselves, but then like on a macrolevel, trying to influence the thinking in the city to say, actually lets, you know, we seem to be all agreeing that this stuff is important therefore let's try and find ways to do it, to find investment for it, for whatever that might be so, that's broadly it yeah.

**DP:** Do you think a greater access to data, with regards to energy data or things that relate to that so, with regards to housing or [the] environment; do you think a greater access to that data, would that help you in your day-to-day process of what you're trying to achieve and what you're trying to achieve as an organisation?

**RG:** I think so, I mean I was thinking about this before and it's one of those things when you don't know what data could be made available, you sometimes can't think what you would like if you know what I mean. But I think there are, there are you know – one concrete example is around erm, so the stuff that you've done already around the kind of solar meeting that you did in July was very useful so I've, you know, had a look at those spreadsheets and it's very useful to know, even though there's a limit to what they've said but it's good to see the council saying we've got a dozen roofs here that we think might be useful, I think that stuff around energy use of buildings is really, kind of useful because that can give, you know, again one of the things, because I'm relatively new to this, the kind of energy world, but you know just, I've seen quite a lot of talk about the importance of kind, of whatever they call it, kind of price stability. So it's made me think well actually that's quite interesting that if we were to work with the council, and get more solar panels on leisure centres, you know, if you've got an environment where the energy prices are going up 10% a year or whatever, that could be a real benefit to a council, to think well actually we've got a stable price for some of our electricity, erm, so that kind of data is kind of useful, and then, again we were thinking, looking at this yesterday around, around fuel poverty. Now it would be great, you know, I think housing, it's kind of, what's interesting in our work is that I think our housing work, and this energy work, will fit together quite well because clearly a lot of energy use in the city is in heating homes, so, the data might already be out there somewhere but our, I would like to know – right I'll give you the concrete example because it helps to illustrate it, so, we would like to set up a community energy scheme in south Leeds and whereas if you were to set up on a commercial basis, you obviously make, you know, in similar terms of the money from it, the community energy kind of model is that you pay some returns to shareholders but usually set up a community fund, to contribute to things, so, we'd like that fund to be around fuel poverty, so what I'd like is to know the exact areas in Leeds where there is more fuel poverty, you know what I mean. Which I would assume, and it's interesting that in the news today that they reckon that they're supposed to be bringing in new legislation that you can't, I think it is, that you can't rent out your home if its energy performance certificate rating is G, or something like that, and you're supposed to have it done by next April, but there's a loophole that means you can probably get round it as a landlord. Now it would be really useful for us, because someone somewhere has got all the EPC data, it would be really good to know that, so you'd say right, 17% of the G rated homes in Leeds are in Middleton ward, that would be where we'd focus our work, you know what I'd mean, if that was the case. So, I think definitely, I think data both to make the case for this is why this matters socially, but then, to actually build your business model, it's kind of really important as well, so it does matter.

**DP:** Yeah, well, so the project we're doing at ODI Leeds is, looking to make as much data available, and the discussions that we've had with different people, they've mentioned a similar sort of thing about fuel poverty, areas within the city which have greater levels of fuel poverty than other areas. I

think the idea is to, long term at least, to have some sort of dashboard or interactive tool where you can, somebody can come in and look at it and see the data and be like, here's an area to focus on. I'm guessing, erm, do you firstly think that there's a necessity what we're trying to do and I suppose, long term, what would you like to see as a best-case scenario from what we've produced? From an energy data [perspective], in an ideal world, what would you have liked for us to have achieved?

**RG:** Yeah, yeah, I think the idea of the dashboard of whatever, the idea of bringing together a lot of it in the same place is a really good idea, I suppose the big question is – and what you are working on I suppose – is what data would be useful and then what data can you find, so I suppose, er I'm just thinking, sort it in my head really but, are we, what do we mean by energy use would be one question I'd have so the first thing that comes into my head is, is you know, energy use in buildings, do we want domestic, do we want commercial. So that they seem quite important, but then are we also talking about, I don't know, are we talking about fuel consumption of peoples cars, I don't know whether that's, I don't know whether were thinking, are we thinking, is it {cough} is it energy in all its forms, I don't know whether that's been discussed at all yet.

**DP:** So, obviously, energy is quite a diverse issue and so when you were talking before about, erm, energy and transport and, I can't remember what was the other...

**RG:** Er, waste and recycling, yeah...

**DP:** They all pretty much tie together in certain aspects, and I think the idea of, having a central hub in where you bring data in, there's no reason why energy data relating to transport can't be there because it's an important aspect, domestic, commercial and obviously the environmental impacts that as well, I think having a purely designed hub would incorporate, ideally, well, in my mind especially, it would definitely. There's no point in having solar panels on loads of roofs if everyone is driving petrol cars...

**RG:** Exactly yeah, no definitely, and that is quite, you know, so that would be quite, I think like yeah, so I think taking a broad view of it, recognising that you know, you have to at some stage think well actually we'll just, well stop here because we can't go on for ever, you know what I mean, in terms of the data but I think I would particularly from the climate commission angle and the you know, it's what my interests [are]. I think, energy as in fuel consumption to get round the city would be very interesting, I'm also interested in that kind of stuff because there's lots of, there's plenty of research out there about {cough} you know that if you've got money flowing around a city, any money that just goes to, to car companies, credit to buy cars and fuel, you know, I can't remember what the stat is, it's something like 76% of that money just flows straight out of the economy, so if again, if we're trying to build a more sustainable both economically, socially and environmentally city, we need to stop we need to reduce some of the, some of the money that's just immediately flowing out which I suppose again, this is why it interests me because that's another part of the case you make for investment in more, in for example in more sustainable transport or in insulation because it just stops that money immediately flowing out, and it means that people who live in the city have got a bit of extra money in their pockets to actually, spend it on nice things in the city, keep it flowing around the city so again that stuff, you know, it sounds a bit kind of pie in the sky sometimes but you know we are all making choices about what we spend on, and a lot of people in this city, because for example public transport isn't good enough, spend it on cars that mean they've got not much money

left for other things, so, err, I'm an advocate of things other than cars but actually I am quite sensible about it as well, it's just an economic thing that, that it's just a waste of, it's a waste of the cities resources, when you've got 730,000 people all living quite closely to each other, and we drive round in our own cars half the time, so yeah.

**DP:** Yeah, it's a bit crazy sometimes. So, you've only been as you said, it's only been a few months that you've been looking at the energy aspect but whilst you've been doing your research and looking at the data and looking through it, has there been any sort [of] barriers that have come up? You mentioned the sort of stuff around the EPCs and things like that, but is there anything else that hindered your research?

**RG:** Yeah, as I say, what was very useful was the stuff you had on your solar, your solar kind of site. So the council being more open in sharing information about roof space was good, however it was quite limited, you know what I mean, and its, I think more detailed information would be kind of good I think, I'm not sure, again for example, I think it said for example they've got some panels on the John Charles centre, I don't think it said how much or how much that generates, they might have done I mean, but I think it felt like that was a really good first step. But for it to be properly useful it needed to be more, kind of comprehensive, it said a lot of things like you know, "we're not sure if this roof is any good", you know what I mean, it's like that's not a great deal of help to me kind of thing but, there's a really good first step erm, so, I've forgotten your question there, your question was about the gaps in the data and things that...

**DP:** Yeah and if there's any sort of barriers that have hindered you.

**RG:** Erm, what else. I mean, yeah I'm trying to think if this is data stuff, for me the main stage we're at with it now is that we just need to, it's almost the, the next stage of – not doing a full feasibility study – but say with the solar scheme, it's now about working out, I need data around sizes of roofs, what you know, what solar panels could generate and then to work out the business model of how much can I pay back, so I think there's, yeah, that I'm trying to work out whether that's data that could be provided but that's certainly, that's what we're lacking at the moment, which is the next thing for me to work on. Erm, what barriers have there been, I can't think of specifics, I mean it does, it feels like there is a general lack of an evidence base, and of data to basically say, this is the picture in Leeds. I think that's the thing that I, you know sometimes I can find, you know – like with transport I can find data that says, you know for the UK that says, whatever it is, you know, 23% of journeys under one mile are made in cars, as far as I know, it would be really useful to have that for Leeds, you know what I mean, to kind of just say right this, whether its extrapolated from the national data or its local research that's been done, I think that's probably going to be, that's probably my answer as best as its going to be. I suppose I'd just add, make the case for the value of local data, it's a lot easier because it's easier for people to you know, dismiss national data sometimes, because I think oh well does that really, you know, Leeds is different you know is it just to say look, 730,000 people, 312,000 cars, whatever it might be, you know, 23% of those journeys, that's X number of journeys made, you know and with that kind of thing, suddenly becomes, you can have conversations with people, and they can relate to it because they know the city, you know what I mean, so that's quite a vague answer but I think it's kind of making the case for you know, local, locally trust worthy data, is just, is really, it's useful for developing your business model, but it's really useful from making the case, having the arguments with people to say, this is what we need to do it. That's the thing.

**DP:** Yeah, I think that's a pretty good answer to say...

**RG:** {laughter} Yeah, help me work it out in my head...

**DP:** {laughter} So, I suppose, I've gone through everything that I wanted to discuss, do you have any sort of final comments or anything that you like, erm, just to yeah...

**RG:** Yeah yeah. Erm, I can't think of anything, I suppose, you know, there is a, we wouldn't be having this conversation if I didn't think it was important, so I'd kind of want to reiterate that the value of doing this work, I think, I would also, as an observer of what's gone on more broadly in terms of open data and everything in Leeds, I think, it's important to see it as the start of a process as well, do you know what I mean, to kind of think well, because you will get, you will be given some, not I mean, not that you'll be, be around with it, with time to do it for evermore but, you know, it, ODI Leeds or whatever who kind of owns the project, you know, sometimes you'll do a piece of work and you'll achieve certain things but it's actually, it's important to kind of then hang around, because some people take longer to give you their data don't they, or to work out why it's important, or whatever, and it almost feels like, you know, there will be a real value in what you do, but then it's also about, thinking about well what's the longer term plan here, do you know what I mean. So ok, that group over there didn't share with us data but there was someone there who was quite interested, and they said they were going to go back to someone and report back to us in March. That needs, in some way, ideally, that needs following up as well, I suppose, some of this stuff, its partly because as I get older, do you know what I mean, it's really important to have you know, really focus on something for three months and then see what we can achieve, but also sometimes just to be realistic and think well actually somethings will take a year, but we've started it, but then we need to keep... you know, so much of my, I've done it twice, I've sent two emails this morning, things from months ago, that have said, ahh right yeah, you know, I asked them for that information then, I'll just chase them up again and they don't care, they've got no interest in chasing things, you know, in getting it for me, but if I keep chasing it, they'll, we'll get there in the end. So it's that kind of, I suppose, it's taking the long term, I think taking a long, as I say I think the focus you have got on it is really good, but also we need to just try and, you know, remember it's a, some of it will take time, but there's a value in the stuff that will be, you know, will emerge over time as well.

**DP:** Yeah, I think that sounds pretty good to me, well...

**RG:** Yeah, could I just say one more thing as well, just in terms of, just to reiterate, so, I'm on the climate commission, I'm one member amongst kind of thirty I think, I think ODI Leeds might be on it as well, yeah, so, I think it's important to just keep feeding back into that as well, do you know what I mean, because that is something that could be very useful, you know what I mean, it could be, the data could be very useful, the commission could be very useful, for this to kind of, get it out more, kind of encourage some people to share data and that kind of thing so that link will, and I'm more than happy, as I say I've got limited influence but I'm more than happy to use any influence I've got to make sure we make that link.

Interviewee - Luke Gallagher, Energy Manager (UoL Estates)

Interviewer - Douglas Phillips, Project Associate, ODI Leeds

Place - Facilities Directorate Building, 2nd Floor, UoL Campus, 13/10/17 3:00pm

**DP:** So yeah, erm, if you could just give a quick overview of what you currently do and what your interests are in energy

**LG:** Well erm, I'm Luke Gallagher, I'm the energy manager for Leeds University, as energy manager as you would expect, energy is a key interest of mine. The university uses a significant amount of energy in the form of electricity, but more so in the form of gas and to a lesser degree oil, so our campus and our buildings that sit outside of our campus have a significant energy consumption cost and associated carbon footprint. My role and interest with energy, my role in the university is to understand our energy consumption, control it, and put measures in place which reduce energy consumption, and so it's energy and water, water sits within that realm as well – utilities consumption – I guess you can call it, erm, so, my entire professional career is dedicated to, to energy in one form or another, it is my, my overwhelming interest, yeah, before we get into any specifics do you want to see what the next question is...

**DP:** Yeah, so, the launch of the Leeds Climate Commission indicates a defined city level drive to meet climate change targets, with this in mind what would your long-term view for the city be, from an energy perspective?

**LG:** Yeah, I guess my focus is and will be on the university but, the university plays a massive role within the city, y'know, and we're not just talking about the energy that gets consumed on site either, we're talking about the volume of people that come to and from the campus who are involved with the university activities one way or another, and we're also of course heavily involved in energy at Leeds, in a research capacity, and all the things we do, as a research institution, erm, so, what was the question again...

**DP:** So yeah, erm, yeah, long...

**LG:** My long-term view...

**DP:** Yeah.

**LG:** Erm, for the city, so my long-term view for the city, yeah, I think the long-term view for the city has to match up with the long-term view for the campus and that is err, it requires a lot of investment, there are different proposals at the moment that play a role in the future energy provision across Leeds, one of those is around [the] hydrogen network – that would have major implications to the university. It's something that we are keeping a very close eye on, the university

generates an awful lot of its electricity and heat on site through a large facility called the generating station complex... {external noise interruption} So, Leeds University at the moment, we're undertaking an investment programme in our generating station complex, as I said, that produces a lot of heat, a lot of chilled water, and a lot of electricity that we use on campus, now that currently, that's fed by erm, by mains gas, natural gas, so that's why we're keeping a very close eye on the proposals to change it to hydrogen, that would have a fairly big implications for that, we believe that decentralised energy is, is an absolutely massive part of any energy strategy for any city, and we're leading by example in that sense and we have done for the last, I don't know, forty odd years or however long the GSC has been operational, I think that sets out our long-term approach as an institution, how that ties into the strategy for the rest of Leeds, erm, I'd like to see more decentralised energy across Leeds, there's some fantastic facilities already existing, the energy recovery facility is one, one of those, but there's absolutely scope for more, more heat networks and more erm, combined heat and power. The percentage of renewables deployed in Leeds is, is lower than I'd like it to be, both as a city and as a campus, erm, and in Leeds University, two things come into play there, our GSC, our generating station complex delivers us electricity and heat at a very economically viable and economically competitive rate, now to some degree that undermines the case for renewables, it undermines the financial case for renewables on campus. We're changing the way we think about renewables at Leeds now, and I would expect to see err, much bigger deployment of renewables across the campus as we move forward, but to date we haven't got that many. We haven't got that much renewable generation on site, aside from the carb... the CHP engines, which are considered renewable in some definitions of the term renewable. So we haven't got as much PV, or biomass or any other of those technologies as you might expect, we've got pockets here and there but, it's not massively deployed and that's similar across the city, there's scope for more commercial renewables within Leeds and those make up a bigger part of the, of the energy demand. Another long-term view that I think cities should focus on, er, is electrification, electrification of heat demand both commercially and well, more realistically domestically, that's something that is a different direction of travel from the hydrogen network, but it's probably slightly more achievable. Erm, and requires some investment in the electricity network and we know that the electricity network has got an awful lot of challenges to meet, and it, indeed is meeting those, but that's probably in my view, I see it as a more realistic long-term strategy for Leeds and other cities across the UK, the electrification of the heat demand, greater deployment of electricity generating renewables, PV basically, and those taking a bigger a role, erm, yeah, so, in terms of how we move forward from an energy perspective, I think, there is a lot of opportunity we'll call it, a lot of opportunity to change the way we're currently meeting our demands.

**DP:** Yeah, so considering that, in an ideal world, there would be more renewables, erm, would you say that the sort of vision that yourself, and also the vision you outlined for the University as well; do you think that that's an attainable one as things currently stand, do you think there's the provisions and support there, maybe even an underlying desire to achieve that?

**LG:** I think that, er, I'll deal with your points backwards. I believe there is the underlying desire, yes, there is, there are plenty of people who are committed to increasing our energy security, reducing our carbon emissions and reducing delivered costs of energy to households and businesses so, erm, there are; there are a lot of people who share those overall goals. There are several strategies within those and everyone's got their favourites so we're not always pulling in the same direction 100% of the time, but the will's there, and there's a lot of institutions, the university included, there's the climate commission, the West Yorkshire Combined Authority, y'know, there are a lot of institutions who have, erm, have done a lot of good work in this area. Coming back to the support and provisions required to make it a reality, well, that all too often falls back to an economic case, which is a bit of,

bit of a shame, but it's, it's what stifles many a good idea, the economic case. The short answer is no, there's never enough money, there's never going to be enough money to support the kind, the scale of change that we want to put in place. It won't be too long before subsidy free renewables are being deployed in volume, but we're not quite there yet, we're not quite at grid parity, and we're not, we don't yet have a smart enough energy network to support the, to support the business case for increased renewable generation in the network so, we're kind of getting there, there's a bit of, er, a few [different] things we need to line up, but it's not as easy as it could be in short. So, there's a big part of the puzzle which is grid services, grid flexibility, and storage of energy throughout the grid network and throughout the network, both at community level and individual property level and within businesses. That piece is being developed and when that's there, we'll be able to move forward quite quickly and we need to make sure that the support, the economic support for renewables or the wider energy future, is targeting the right places and supports that, and recognises that that is a stepping stone towards a kind of holistic, balanced energy network if that makes sense, while where we've seen er, a kind of erosion of economic support for, for renewables in the form of feed in tariff, RHI, and increases in business rates. So, we've seen that; that has harmed the deployment of renewables as they are, that needs to be balanced now, so that that withdrawal of subsidy needs to be balanced with a recognition that the market really needs to support grid flexibility and storage, in order to make the whole piece work. The argument for withdrawing the support for renewables was, actually, there's plenty of them. Well we now need the rest of the grid to be able to deal with those renewables and to deal with future renewables, and so I guess long story short, it can seem like there's some money there, but it might not be in the right place, right away. We're nearly there, we just need to get the cash in the right place understanding that, it's the storage bit, and the grid flexibility bit that we need to fix now, erm and that will pave the way for the economic cases for the rest of it and it will be then a market driven, a market driven thing, so, it's kind of a mixed answer there, bit yes, bit no.

**DP:** Yeah, well you sort of answered question 3 in that so that's pretty good, well done {laughter}. Erm so, so my project's on energy data; I suppose you did touch on it during the first question but, the university as an organisation, do they have any specific goals and aims with regards to energy generation, is there anything they've got, sort of like the policy...

**LG:** Yes, very much so, very much so. So, we've got a target of carbon reduction of 35% reduction in all our emissions as an institution, against a baseline year erm, and that baseline year is, two thousand and {laughter} you might have to fill that bit in after the interview {laughter} so we've got a baseline year, we took stock of our, I believe it was 2004-5, it might have been 2-3, anyway, we calculated our carbon emissions and said right, by 2021 we'll have reduced those emissions by 35%, no matter how much we grow, no matter how much that is, it's an absolute target, and that target remains in place and we're working hard to try and get there. Of course it's a challenge because since that baseline year we've grown significantly, erm, and whilst our emissions per head is comfortably below that number, or below the number that needs to get there if we're a stable size, erm, our overall emissions, we are actually, believe it or not, we are on track, but it's a struggle, it's hard work. Its taken a lot of investment and employing a team of, of 5 of us downstairs just to deliver, and manage our energy data and to get us there so, there are absolutely some hard targets and commitments, that headline policy or headline strategy target of 35%, that filters down into all of our policy's and all of our procedures across the university. So, we've got erm, sustainable construction standards for everything that we build now, and everything that we refurbish, we've got, we've got standards and guidance around, erm, purchasing of small power equipment, so anything that we plug into our offices has to meet a certain rating, we've got behavioural campaigns, we've got all of that activity and all of the rules, regulations I suppose you'd call them, erm, and an

investment in retrofit programmes and behavioural campaigns, all of that stems from that 35% target, so yeah, so, the short answer is yes, we do have a target.

**DP:** Excellent, well, so, considering those goals and aims, and what you've just outlined, how reliant are you on data to achieve that?

**LG:** Massively, massively.

**DP:** And do you think erm, an increase in the data that you could get hold of, would that help? Do you think your data requirements are all within house...

**LG:** Errr, interesting. Actually, [the] majority of our data is in our own hands, so, when it comes to, I suppose the outcomes of your project is in joining different data sources together, our focus is, is almost y'know, without the risk of navel-gazing, is almost within our redline of our boundary. If it's our building we're interested in it and it's our responsibility to deliver that, erm, we submit a statistical return every year as a university and that covers everything, within there is, is a measure of our energy consumption and they calculate, HESA higher education of statistical authority, which I'm sure you're familiar with, calculate our carbon emissions for us, so, in that sense we've got very very robust data, that is the, so top line we've got very very robust data. What we've got as a university, we've got a number of systems which give us information from our buildings on a live basis, so we've got a monitoring and targeting, erm, piece of software, which gives us real time consumption from, energy consumption at a building or a sub building level, or you know, a submeter level. Erm, on electricity, heat, and water, so, we've got lots of data, we've got loads of it, and the quality overall is generally pretty good, we've some gaps with some of our metering, dropouts that are natural, so the data we have, yeah, is there or thereabouts. Some of the difficulties we encounter are, working with, working with data from the grid can be difficult, well it's not really data from the grid, it's trying to predict market trends and, er, and match our consumption pattern, to not place too much stress on the national grid. We can't do that bit yet because we don't necessarily have, have the ability to interrupt the grid in that way, but yeah, I think, we've pretty much got what we need, selfishly, within our little bubble. How then we, we interact with other parts of the city is something that we're really keen to understand, to do better, I don't have a solid view on that yet, erm, with regards to water, we know that our water consumption has an impact on the city and vice versa, in terms of the delivery pressure we're able to achieve on site, I suppose that's more of a supply issue than a data issue, but if, I suppose if we had some data around where, where water is being used, how it's being used, we could use that to inform our water strategy, to make sure that continuity of supply and pressure is ok, less about overall consumption and more about peaks and troughs, in demand, but if you trim the peaks you naturally reduce consumption, erm, unless you pump it into a tank which is something different. But, generally, aside from a little bit of a gap in knowledge on water, what we need to know we can usually lay our hands on because it's within our [inaudible] lay our hands on it. I can't, I can't think whatever data, erm, coming purely from an energy management perspective, we will be able to use for Leeds, I know when you get, starting to get slightly wider and you're talking about wider sustainability, doing a lot of work on air quality, and that's when the data needs to start to get a bit bigger, and we understand how we can, how we can use some of the data that already exists out there, but yeah, erm, no I think for us it's mainly in house.

**DP:** Yeah, again you've covered sort of, errr, the fact that it's in house. I'm guessing it wouldn't, if anything was to be made available erm, is there anything of particular interest? But like you said it was mainly water...

**LG:** Yeah, water consumption patterns from Yorkshire Water would be useful, erm, what other data sources have other respondents to this, come up with? It might just be that I'm not imaginative enough to think of ones that would be useful.

**DP:** So, for example, I mentioned Data Mill North to you, again I don't know if you had chance to check it out but, it's basically... there's data.gov which is a big set of databases, but it's huge, I think 60,000 databases on there, it's horrible to use and if it's anything specific – so, around Leeds it can be, you can spend days just, just trawling through things. So Data Mill North was set up as, erm, a hub for all sorts of datasets to be brought in specific to the north, Leeds took quite a big lead on that and Leeds City Council put quite a lot of their stuff on there, so consumption data, erm, they have quite a bit of PV, which they put on there, stuff to do with EPC ratings, that's on there, erm, what else is there, I think there's about 500 odd databases, and I'd say Leeds City Council have probably been the most productive. Northern Powergrid have put some stuff on there with regards to substations, I think they're wanting to put more on there, I know the City council want to put more on there as well, I think they've got the data for the half hourly production data from the PV and they want to get that on there...

**LG:** Oh, that would be useful actually, so that would be useful because we're building a case for PV investment on our sites, and er, the more local information you can get about PV performance, the more robust business case you can build for that. So that is really useful. You'd have to work that back into my answer to make it sound like I came up with it myself {laughter}, erm, while you were speaking I came up with another one, this is again where, data/strategic plans, y'know, because data tells you what has been, strategic plans tell you what might be used to try and inform that, erm, so we are investing in, some research facilities outside of our campus and one in particular would have a significant energy demand and we need to work out how we're going to meet that demand. Now, the more information we had about any surrounding demand, particularly for heat, the better you know. So, this is going to have a huge electricity demand, er, and then a moderate, if small to moderate heat demand. Now combined heat and power they deliver both, heat and electricity, so we need, we need, well, if we had information about, or data about the heat take-off from surrounding areas then actually, the, our business case can be built. That allows that to happen, erm, and that, that's an example of the kind of data that would be useful to inform future off campus development, when we're sitting outside of our private wire network and we're looking to build... can what's going on in the surrounding [area] support business case for larger generation or distribute generation, so larger small generation if that makes sense, rather than just serving our own building, y'know, it's easy to go, well we're going to build this you can have demand of this, we'll put this in to meet it, if you've got any data from around and abouts you can say, well, guess what guys, we can do you for cheaper as well.

**DP:** Yeah, yeah, so it's stuff like that which is, why, this project's been put in place really, just to get these conversations, well, to make it sort of clearer...

**LG:** Yeah, the example I've just outlined is, is a particular case and we do, we are taking a view on what may be around it, but if there was data that allowed us to do that, every one, I mean, that's really really big, but, on the smaller stuff, sometimes it just doesn't get considered because, y'know, its, it would hold up development if we had to ask everybody what they wanted us to do, but if the data was there for some of us, more of the science, when we're doing a refurbishment or, you know, yeah, that could be useful.

**DP:** Excellent, erm, and just another thing that came to me, that the council are in the process, or at least putting together to put on up, is relating to fuel poverty, erm, I think that's one of their, obviously, one of their big things. Whereabouts in the city there are hotspots for fuel poverty, so, yeah, I'd say, they've been the main push for putting things on to Data Mill North.

**LG:** And I guess, from a University of Leeds perspective, we don't have a huge, the energy management function doesn't have a huge roll in talking fuel poverty, sustainability do have a community investment element, and, they will look to run programmes which, to engage those, erm communities, but, from an observer perspective and my own personal views around that is that, the lack of available data on fuel poverty has really held back the efficient spend of some of the government programmes that have gone, gone before so, the likes of CESP certainly, ECO which, I don't know if you've come across those programmes but...

**DP:** Yeah, because they're on to ECO2t now...

**LG:** ECO2t, yeah, the world of ECO2t, now, CESP, erm, in particular had a mechanism that tried to encourage community scale activity, but there wasn't the data to support that, so it required a lot of upfront, a lot of guess work from the contractors involved, and a lot of upfront surveying. There's been a slight move forward, in that the EPC data is now freely available in spreadsheet format, erm which I think you might have discussed with me on the phone actually, now that is a great leap forward and, it's just a bit too little too late, because the funding that that's going to be used for is now much smaller. And there are fewer, err, larger companies interested in a big way in that space, now, the ability of a large company to create a large scheme is somewhat overlooked, I mean the government have always said oh we want to bring as many, SME businesses into the chain as possible. Now, I appreciate that view point but what that doesn't give you is, is the ability to build scale, so, the data element has been fixed but the cash element has kind of been withdrawn, which is a bit of a pain, but that's a good example, and fuel poverty across Leeds, err, as an incomer to Leeds I don't know it as well as, as I know fuel poverty across the north east of England, but I imagine it follows a similar trend in that its, an ever increasing problem, particularly clustered in certain areas, er, with a growing divide between the haves and the have nots. So, any data that can go to tackle that is, is, it can only be a good thing. Erm, not only hard data on properties but also personal data, and you know, used under, in the right sense but, the ability to use DWP data to identify particularly vulnerable clients, that's been a difficulty for a long time, but that's outside the University of Leeds remit, you know, that's just my personal band wagon.

**DP:** Erm, so, my next question was what are the challenges, erm, surrounding energy data and getting hold of it? But obviously those are sort of in house challenges...

**LG:** Yeah, so, I mean but they're in house challenges, but the challenges are the people, are the people getting data, you'll find as well, so our, we've got a very very complex portfolio, some of our challenges are technical, it's about getting the data from where it gets collected to where it needs to be, which is on our system. Another challenge is around making that accessible then to people who need to use it so, having different ways of presenting it, to make it understandable and useful, not just to decision makers in terms of what we do in the facilities management department but also, as building users, how can we make that data that we're collecting accessible, so somebody thinks that we should turn the lights off. So there's challenges around that, erm, I think your question is probably more about how do we get data flow between different parties, er, and there aren't really, I am free to share my data, within the realms of commercial sensitivity and, y'know, under the, in line with the data protection act, as much as I want really. I don't see any limitations on it because we're able to use it to, to kind of further our cause which is sustainability across the [piste?], it doesn't matter if we save emissions or somebody else does, it's still a good thing, I haven't come across any no's either if I've asked for data from somebody else, so I haven't encountered any issues with being able to get hold of something that would be useful. If it exists, it's usually, the stuff that we want is usually accessible, yeah, commercially, there isn't, well that's commercial, and so when you're talking about data that's generated delivering, large scale retrofit programmes in the housing sector, a lot of that data will stay with the people that delivered it, but you know, that's because they've had to spend the money getting it, which is fair enough.

**DP:** Yeah, yeah, erm, I suppose we've pretty much covered everything that I wanted to really chat to you about, erm, other than so, I've explained to you the project that I'm doing and do you think that, what it is I'm trying to do... Do you think there's a need for that centralised hub? Do you think that's worthwhile, obviously, it might not ultimately impact upon the university too much, or maybe it would...

**LG:** I would see this as putting more in than we took out, but I don't think that's a bad thing, because I think that, we're very keen, I'm very keen, particularly, in and around the business, to be accountable for what, for what we are as an activity, so what we are as an operation. You know, we have an impact on Leeds, and overwhelmingly that's a positive but there are some elements to that which, which we need to be responsible for, and that is our impact on the climate, erm, and I think it's absolutely fair that we share as much as we can, be as open as we can about what we're doing and what we're consuming so, so we're able to be held to account. So I do think that it's valuable and I think it's valuable that we put stuff into it, in terms of what we could use the data in there for, some of that, yeah, sometimes you don't know what you've got until you've got it, so, it's difficult for me to always say oh, if we had this we could do... if we had X we could do Y, because, at the moment like as you said most of it's in our own, in our own hands, but, who knows if I had a look, y'know, if everyone chucked their data into a pot, suddenly we might find that, well there's a really clear project here, there's something we can use that for, and that's just from an FD perspective, I mean, think about the researchers and the academics of the university, of course, they'll want all the data they can get their hands on, I don't know what they'll do with it but, they'll do something really clever with it and come up with a research proposal and, y'know, save the world that way. So, yeah, there is an absolute value in being as open as we can, with all data, which is the joy of moving from, personally having worked in the commercial sector, moving outside of that, it's that overall objectives and our overall outcomes, that you're able to work towards those without having to worry about what your shareholders are thinking. So yes, long story short yes, there is a value in what you're doing, which I'm sure is what you wanted to hear {laughter}

**DP:** {laughter} That sounds perfect {laughter}

**LG:** {laughter}

Interviewee - Jacqui Warren, Head of Energy & Sustainability, WYCA

Interviewer - Douglas Phillips, Project Associate, ODI Leeds

Place - WYCA Offices, Wellington House, Leeds, 23/11/17 3:30pm

**DP:** Erm, so yeah, if it's ok, could you just give a brief overview of your role and your interests in energy

**JW:** Ok, yep, so my role is Head of Energy and Sustainability for the Leeds city region and I work for the West Yorkshire Combined Authority, as a team we work on a range of different issues relating to energy. So, we spend the majority of time looking at clean energy, energy efficiency and also the policy behind that, but we do also as an organisation, WYCA, and the Leeds city region have a number of programmes that are actually physically delivering as well, so we have our resource efficiency programme which is a programme that supports businesses to reduce energy, erm, and also a number of the environmental resources, so waste and water in particular and the other key delivery programme we have at a city region level, which works with all the local authorities, is our Better Homes Yorkshire programme. That's a substantial programme that is offering a range of different energy efficiency measures to a number of different housing tenants across the city region. Most recently we secured a range of funding sources to look at fuel poor homes and what we can do to address fuel poverty in those homes, looking at particularly off-gas areas and looking at a range of measures to make their homes more energy efficient, new boilers. We are also looking at maybe air source, ground source heat pumps, those kinds of things so, we have a bit of the policy side, but we also have a clear delivery programme. That's a bit of a flavour {laughter}

**DP:** {laughter} Fantastic, erm, so, following from that, we've recently had the Leeds Climate Commission and an indication to produce a city-level drive to meet climate change targets. Obviously you look wider than Leeds itself but what's your, and I suppose the organisations, long term view for the city and the wider region as well?

**JW:** So, in 2016 the Leeds city region, at a bigger scale, developed their strategic economic plan. Within that economic plan there are four priorities. One of those priorities is around creating a zero-carbon energy economy, erm, that's obviously a long-term ambition to 2036 and we have a number of headline initiatives that, we believe, will help us to get there. But obviously it's very challenging {laughter} erm, so, I'll just explain what that really means. So the priority is around creating a zero-carbon economy, we've identified within that four key areas that the city region, including Leeds, will aim to drive forward and there will be projects across the geographies, but we have firstly a whole programme around clean energy generation. Currently, we have a very effective district heating programme across the city region – oh I forgot to mention that in the first question – but yes, so we've been working with local authorities across the city region to help them to understand firstly where they have opportunities for district heating and then helping them to secure funding partly through, er, something called the heat... HNDU, Heat Network Delivery Unit, which is part of central government helping them to secure funding. And, again, we've had, I think, something like fifteen different projects so far that have actually gone through various different feasibility studies, master planning studies, detailed techno-feasibility studies. There's a lot of different stages obviously, it's quite complex but, so we have that programme and that's looking very much at heat and the distribution locally of heat. The other key thing that we are currently working on in terms of

[the] energy generation side of things is something called the energy accelerator – it would be a Leeds city region energy accelerator. What that will do is, it will be a hub of, you know, a physical presence, it will be made up of a range of different technical and commercial experts, and the idea behind the energy accelerator is there is a current market failure in terms of, er, being able to get good quality robust data, robust data in terms of both the kind of technical and the commercial feasibility for low carbon projects. Erm, and a lot of the time it's because you have a good idea, but you can't show the hard numbers to the relevant powers that be, to enable you to get some money to do further, to do all that important feasibility work. So there's a bit of a gap, our energy accelerator will bridge that gap, it will give technical and commercial advice to help different partners across the city region who have good ideas – good low carbon energy generation project ideas – help them develop them and then get them to the point where they can either attract investment or they can invest themselves. We are currently, erm, in the final stages of applying for the ELENA, [the] EIB ELENA funding, so it will be funded through that. There is some match funding from the Leeds city region as well for that and [it] will be a three year programme, the idea is that [it] will support maybe 20 or 30 projects across the city region, some of them obviously big scale and some of them not so much, or some of them will be aggregated, so a number of local authorities that might want to do some street lighting projects – the idea here is that we bring them all together and we do all the feasibility and all the technical things they need to do as a collective piece, rather than each one of them going out and or doing it separately. There is an economy of scale as well to that. So, that's energy generation, we also have... I've mentioned the second part to achieving that zero-carbon ambition to 2036 is looking at energy efficiency, I've already mentioned our better homes programme, erm, but we obviously want to be able to develop more and deliver a greater range of energy efficiency measures across the city region. We continuously try to apply for various pots of money as and when they come out – but I'm sure you're aware that the government has made it quite tricky and certainly changed a lot of the goal posts – which used to be available to us to actually fund quite significant numbers of energy efficient measures. It's become quite hard recently to do that, and the same with the energy generation and the energy accelerator, you know again, changes [to] government subsidies have not exactly helped with some of those things...

**DP:** Would you say the funding issues are the main thing that hold up the long-term goal of getting energy efficient housing and increases in energy production, erm, renewable production... would you say that funding is the key? That that's holding that up...

**JW:** I think sometimes it's also about data – which you'll be pleased to hear, {laughter} not just saying that because you're sat in front of me [laughter] – erm, I think a lot of the time, and I might be you know, this is my personal experience, not necessarily at WYCA but in a range of different other posts that I have held for a number of years, is that we always struggle to be able to give robust evidence to make the business case to either get more funding in to do more feasibility work, or to be able to have your finance officers, their heads of finance, actually to give them credible numbers for them to actually say, “yes, this is something that we want to invest in”. So I think yes, there is always going to be a need for funding, but sometimes it's hard to get that funding because we just don't have the data available to give people confidence in the project that we're trying to work towards. Erm, and there are also some very obvious problems at the moment, certainly in the public sector, with public sector cuts, it's just having people in place to be able to even look at some of these issues – that's also another potential barrier to delivery. Just right now anyway, in the last four, five years we've definitely seen a reduction in the amount of people working on energy, sustainability, some of those areas. So, if there are no people in the organisations there to do it, you know, it does make it a little bit harder...

**DP:** So, I suppose, it sounds like WYCA is very dependent upon data. Without going or being too specific – because from the sounds of it you've got lots of different projects – but are there any kinds of data related to energy or energy efficiency that you would be particularly interested in getting hold of? What sort of holes [exist] in the data?

**JW:** Hmm, yeah. I mean I haven't spoken about transport at all, so obviously WYCA is also, er, we obviously are the transport authority for those 5 West Yorkshire authorities, so there's probably a whole separate conversation I can certainly have with you, with colleagues, certainly around some of that. Erm, but I suppose, in terms of data, at the city-region we mainly rely on data that we get from central government, and again we have a number of data sources available to us, one that we use particularly for carbon emissions and city-wide emissions would be, what used to be called National Indicator 186, now Per Capita CO<sub>2</sub>. We get that data on an annual basis, but the way it is collated takes 2 years to actually collate it, so actually for us, in terms of our ambition, it's very hard to have live up-to-date data in terms of how we are performing as a city region, in terms of carbon and energy. The government gives us this data, but it's 2 years out of date by the time we get it, so you know... We could implement some amazing, hypothetically – it would be quite hard – but obviously we could implement this huge regional scale project, but we wouldn't know its impact for 2 years based on the current data that we get. There are obviously lots of ways of us trying to collect that data separately, but to put it in perspective, for us to know how we are performing against our high level zero-carbon ambition as a city region, the governments dataset, they have to go away and they have consultants that collect the data from all of the big 6. So any, er actually any energy supplier, they get all the data – so what we're using in our homes, that's collated, they then get all the data that all the businesses, industry, commerce, all of that energy data is then fed in. They also include anything related to farming, farming kind of datasets and also any data from all the forecourts of petrol stations. All of that. It's quite a big dataset, so for us to try and replicate that would be phenomenal, but... smart data is a different matter and smart meters and all those kind of things, intelligent energy systems will potentially, I think, give us access to a huge amount of data. Currently we are quite reliant on some of these quite anti, you know, antiquated systems... Transport, you know, I won't... I'll ask the question and come back to you really on that from our colleagues in transport, and particularly because I'm sure there's lots of things that they would {laughter} they would say. Erm, we do have lots of other datasets that we have collected ad hoc, but through other means, so things like our district heating programme. We obviously have quite a lot of detailed data at that kind of individual building level understanding what energy demand they have, we do have some quite specific city scale datasets as well, and energy efficiency, we have a lot of data on energy efficiency that comes from EPC ratings that the EPC assessors, obviously when they're out and about, that's then recorded and you can get access to that. We have to pay for it so, erm, but we do have quite a good set of data there. And then there's lots of other datasets, like energy consumption, feed in tariffs, lots of different renewable energy datasets again, national datasets, but you can drill into our scale, our locality, probably down to a local authority. Some of them are then down to a super output area, depends on the dataset. So, we have data, but they I think, certainly smart meters and some of these other things coming forward in terms of helping us to have more of it. I think for us, things like the work you were talking about earlier, if we could identify relatively easily where our high energy intensive industries were across the city region. That is a really powerful thing that we, as a city region, can then actually use to try look at what support could we give to some of those energy intensives, to help them increase competitiveness, help them build productivity, so these are all things that are equally as important to us as the LEP element of our – so that's all about the economic supporting the growth side of things – erm, yeah, so I think there's definitely some gaps in that local level that would really help us to build some very meaningful additional projects to what we've got, because obviously, I've talked very high level and they are

only the beginnings of the things we know we need to do to meet this zero-carbon ambition. Clearly what I've described already is not going to do that, even with the transport things, and clearly we have programmes that are around electric vehicle charging and hydrogen opportunities, all those kinds of things. We are currently doing an energy strategy, that's funded through BEIS, and that will conclude probably in March, April time of next year, erm and that will hopefully then give us a roadmap – I'm not going to say a line by line delivery plan because it's impossible, you know, the energy sector is so changeable, nobody knows exactly what is going to happen. The best we can do is use some scenarios to try and work out what might happen in the long term, in terms of how we heat our... how we decarbonise heating, further work that we do on energy generation, electricity generation, those kind of things, so, we will have a robust roadmap to help us to then make sure that we accelerate in key technologies to get towards that zero-carbon ambition. We've made some good progress to date but really this new strategy will help us say, "well what are our strengths, and what is it we really should be focussing on in the city region" and that will obviously then filter down to the local levels, so the work that the commission and everyone else is doing in Leeds is great you know, it's fantastic and will all help, but there is a higher scale where as a city region we need to say, well you know, what is everybody doing? Is it enough? And then, what can our role be in helping that happen? And that's what that energy strategy will, and the BEIS funding is going to do, hopefully.

**DP:** Well that's fantastic, you've pretty much answered the questions before I could even ask...

**JW:** Sorry {laughter}

**DP:** No, it's brilliant. It makes my job a lot easier {laughter} erm, and just finally, so I gave you an overview of what my project is – that we're trying to produce at a city level, an infrastructure for data to be accessible and then, help with the uptake of energy projects and energy efficiency projects. Without putting words in your mouth {laughter} do you feel that's a good idea? Is that the sort of thing that you'd like to see more of, erm, and yeah, do you have any comments relating to that aspect?

**JW:** I think, having relatively good quality energy consumption and generation data that anybody can look at is really useful, because potentially that's how great ideas spring from. People don't necessarily think about energy in particular, you don't see it, you turn the light on, it's all just always there – having real datasets that show the scale of just how much we use in real terms, in easy to understand terms, you know. KWh or stuff, people don't [know] what that is, so there's definitely got to be something around helping people to understand the data as well; being able to see that there is a problem, being able to see where that problem is. Erm, very energy intensive industries for example, or you know, housing at quite a significant scale is very inefficient in terms of energy demand, it means that we can actually start to say, "well look, that shouldn't be happening, what can we do?" and it doesn't have to be public sector, it can be private sector, it can be a group of individuals who just want to do something, you know, [be] proactive. It could be lots of SMEs who are looking for innovative ways to kind of, you know, solve any number of different issues. I think that the problem is, at the moment, it falls down to a few of us that have access to some datasets to try and solve that because we are the only people that can see that. So having something open means that, hopefully, more people can understand the problem and actually start to help solve it {laughter}

**DP:** Exactly. That's answered all of my questions.

**JW:** The only other thing I should say is that clearly, I should, we probably should have spent a bit more time talking about transport in particular as well, but what I think is I probably could send you some key documents because there's some, where going to run out of time today I'm afraid. Erm, because there's a lot of work that we're certainly doing, there's [the] low emission strategy for the West Yorkshire Combined Authority, [the] new Transport Strategy for there as well, and that clearly has quite a lot of decarbonising elements to it; replacement fuel, electric vehicle charging in particular, electric vehicles, so there's...

**DP:** It all starts to tie in together...

**JW:** Absolutely. And one of the things that we are also trying to do is to try and link the two a little better as well, so actually can we create more clean energy to power more of these electric vehicles and that's, you know... We're not there yet, but that's certainly an ambition that we are all, you know, keen to explore a little bit further. But I'll send you some more information and if you want more and the data link to the transport, then I'll put you in touch with my colleagues, they're the experts on the data side.