

Respondent 12

Ok so you're carbon manager, I understand, what does that entail?

I am yes. Basically it's absolutely anything to do with energy, so it's anything from the contract, to procure energy, through to projects to reduce energy, and everything in between.

Ok great, so have you seen an increase in spending then on sustainability projects recently?

Over the last two years, so I started in June 2015, so coming up for three years, and that coincided with the university investing in efficiency projects at that time yes. So it's about, um first two years about a million pounds and then down to £500,000 this year.

Ok, and haven't you got one of the oldest renewable PV systems?

Yeah, so on Northumberland building, we have the first building of integrated solar PV array in the country. And that was put in, I'm trying to think of the date now on top of my head, but I think it was 1998, or 99, or something like that. But yeah we renovated it two or three years ago, and its more efficient now than when it was first put in.

And do you know why you did that, was it because of the feed-in-tariff?

No, we couldn't get feed-in-tariff on it, because that just goes off when the installations first put in. It was basically because the original inverters which converted from the DC from the PV panels to AC for the buildings, they have very limited lifespan, so the inverters have broken basically. So we basically had to put new inverters in. So we took the opportunity to split them, where it had been one array, we split it up into different areas. Which means that if any areas shaded, it doesn't impact on the rest. So that's really how it's more efficient.

I see ok, so how much of the energy consumption do the PV arrays actually cover?

Ah yes, actually cover, on that one, um, not a very large amount to be perfectly honest, so its something like a 40Kw array, but with the age of the panels, something less efficient then, compared to now, so it probably would be, across a year, I would be surprised if it even got to 5%.

Oh ok, is that for the ones now then?

Yes yeah.

And would you ever think of installing more across the buildings?

We do yes, so that was obviously done in the 1990s, and over the last couple of years we've put 110 Kw on Sports Central, which covered the roof up there, we've put another 30Kw 40Kw on the sports centre in court lane, we've put 30Kw on the roof of this building, 12Kw on the new CIS building. So yes were continuing to do PV, and we're looking to do more this year as well potentially.

And is that because of the image that it gives the university, or the decrease in energy costs?

It's a bit of both so, um, we've got the signs up so its good publicity, because normally you cant really shout about look how much more efficient this is compared to what it was, because there's nothing to show for it, but with the PV arrays you have got something to show for it. So that's definitely one element and we do publicise it. But also it just makes sense, that the key sense. We get good return on investment, about 10 years, that's what we work towards, so as long as it shitting those return on investment targets, then yeah we'll keep doing that.

Ok, so, do you have a combined heat and power system as well?

We have a CHP in Sports Central. Basically because you've got the pool in there so you've got the constant heat loads, so that's why we've got that in there.

And do you get feed-in-tariffs for that as well?

We don't know. You don't get any, you can get reduced renewable obligation on the gas, it's a small one, I haven't really done much with that. Its only 110Kw so it's just a small one.

So do you purchase renewable energy?

Yes. So we've got 13 of our large suppliers are for electricity. And that covers probably 95% of our electricity use. The other 5% we've got quite a few smaller, but they're just in the little buildings. That 95% is certified green electricity where we get the certificates basically to show that yes its not been double counted anywhere else.

Ok and what were you're motivations for doing that as well?

Again, it was something that had been done in the previous electricity contract as well, so yes it is a very small premium for it, but again it's for the same reason.

Yeah, and I guess when you're buying it in in that much volume then it's worth the investment.

Yeah, I dare say if it had been much more expensive then we wouldn't have done it, but it was very tiny additional amount, it was only about 1 or 2% difference.

Ah ok yeah that's not too bad then. And who deals with the energy trading, is it you in particular?

So what I do is I work with another partner Campus services which deals with finance, so um, at the start of the contract, and we're coming to the end of the current contract for procurement, and were starting on new energy contracts. We have a flexible buying system, o basically at the start of the period, we started in October, for four years, and we'll be looking to buy energy pretty much from the end of this month going forwards for those periods. And what we do is, it's a system whereby you set a target above what the baseline current energy price is, as you're prices start going up and that line crosses, then you buy at that point. So yes, and then our energy broker deals with that for us. We just say that's the strategy you want, then well keep reviewing it quarterly but as long as it's working for us, well keep using that strategy.

So how do you keep track of energy usage across the campus?

We have a couple of different systems, so we have Systems Link, is our main energy management system. So all of the invoices go in there, and for all of our main meters, we also have our half hourly data going into Systems Link. So that's our main reporting tool for our total consumption. Where we've got sub meters in buildings, we also have a system called Invisible Systems. And again it provides half hourly data for all of those meters and we monitor those.

Yes ok, and do you have systems in place to try and reduce the energy usage of staff and students?

Um, behaviour change type thing? We do yeah, its something that we, it probably falls behind a little bit because of time constraints, so you get much better impact and guaranteed impact with capital projects than you will do with behaviour change type things. Uh, but Katie Ridley is the sustainability officer, so I deal with energy, and she deals with the sustainability side of things, so it sort of falls between the two of us. We have things like Go Green week to try and promote it but what we've

found is that students in particular have very limited impact on energy use within the university. So um, best will in the world, were not going to get students turning off the lights in classrooms when they leave, because they don't own that space. So they're not going to do it. It's only the student accommodation that you can only make sure they have an impact on that.

In terms of staff do you have any systems to reduce their usage?

Yes so we've got Green Impact teams in every department so yeah, and they work within their team to try and reduce energy use and have schemes going on for that.

Do you have any schemes in place to help the community become more sustainable?

We don't it's not something that we've got into at all with our support at all so no, no.

Ok, and I don't know where I read it, but do you have a shared energy scheme with Newcastle City Council? Do you know anything about that?

Um, no, Newcastle City Council were looking at putting up a district heating network. It basically has never come off. I think it was just changes within the council and perhaps it didn't stack up financially for them, so yeah it seems to have died a death. I think its still there in the background but I think the people who were doing it have moved on, so yeah, I think its still there as a potential, we've got it there at the back of our minds, but were certainly not relying on it.

And then finally, I've actually spoken to Newcastle University's sustainability officer, and he was talking about their investments in fossil fuel companies and how they're thinking of possibly changing it so they're instead investing in a community to put solar panels on their rooves, and then potentially buy their export from them. Is that anything you'd be interested in doing?

It's something that we're looking at in the investment policy with the university. The thing is unlike some of the larger universities or richer universities like Newcastle, we don't actually have any investments like that. So Northumbria doesn't have, that's part of the reason we don't have an investment policy, because we don't actually invest in anything at all. So yeah, but for some of the things like the student union surveys that you do, there's always a question in that and you get marked down if you don't have a policy, so were looking at having a policy even though we don't have any investments! So that's what Katie's been doing. I think it's the Green League that has a question in for that, so we get marked down because we don't have one, but we don't have any investments.

Yes so there's no point having one.

No exactly.

My research is basically looking at Blockchain, so have you heard of Blockchain?

I haven't no.

So it's a technological platform, so do you know about Bitcoin?

Oh yes.

So they're looking at trading energy on Blockchain and there's a research group looking into it at Newcastle, and obviously there's massive issues with it at the moment because it consumes a lot of energy to use, but there are other types of cryptographically enabled distribution computer application spaces that potentially could work. And I am interested to find out how people would

feel about trading electricity via that technology, with the local community, so a neighbour for example could buy electricity from their neighbour's solar panels.

Oh I see right!

Yeah so sort of setting up mini temporary power purchase agreements, things like that.

So would that be anything you'd be interested in?

For us, if there was the potential to buy off renewable schemes, I dare say yeah. If it's cheaper than were getting off the grid then yes, we'd certainly consider that. We'd never, I can't see any situation where wed ever be exporting.

No.

Our energy demand would always be too high. So none of our PV arrays are ever likely to export. Perhaps if the buildings completely shut down, but I cant see that happening. Yeah, I think if there was that sort of scheme out there. I think wed have to see how we could work it on the procurement side of things, but yeah I think it probably would be good to do that, rather than setting up an agreement with a big company, setting up a permanent power purchase agreement, yeah I think that it sounds like quite a reasonable thing.

Ok great, well thank you very much for your time.