

Transcript – ENWL ED2 Open Hearing – 23rd March 2022

Steve McMahon, Ofgem, Deputy Director, Network Price Control Setting – introduction:

Good morning and welcome to the latest of our RIIO ED2 Open Hearings. We're into the second week and today it's the turn of Electricity North West.

I'm Steve McMahon, Ofgem's Deputy Director for Network Price Control Setting and the SRO for the ED2 programme. Before handing over to Martin Cave, Ofgem's Chair, for some opening remarks, I will briefly cover a few housekeeping issues for today's event – and apologies to those of you who may have heard this already at any of last week's sessions.

Firstly, all attendees should note that the session is being recorded and a transcript will be published including all the questions posted in the chat from participants. The session will also be operating as a moderated Teams session so the visible participants are currently limited to Ofgem panel members, ENWL attendees and the representatives from the independent ED2 Challenge Group and the ENWL Customer Engagement Group. From Ofgem, alongside myself and our chairman, we have John Crackett – non-executive director and Akshay Kaul, the Networks Director. From ENWL, we have Peter Emery – the CEO, Steve Cox - DSO Director, Stephanie Trubshaw - Customer Director and Paul Bircham - Regulation and Communications Director. From the Challenge Group we have its chair – Roger Witcomb and its member, Bob Hull. From the ENWL Customer Engagement Group we have its chair, Jeff Halliwell and its member – Beverley Keogh.

All other attendees will have their cameras and microphones disabled in the meantime – if you do want to participate in the Q&A then please post your questions for each of the sessions in the chat along with your name and organisation – so don't use the 'raised hands' function as would be normal in a Teams event. The questions are being moderated by some of my colleagues and if your question is selected then we will come to you and we'll enable your camera and microphone for you to pose your question to the ENWL team. You will still have to unmute yourself from your laptop, we did have a few issues with that functionality last week. If for whatever reason the technology won't let you appear then I will cover the question on your behalf. Time is limited so it's unlikely that we'll be able to cover every question but these will all be collected and we will look to ensure they are covered as an addendum to the post meeting transcript. The session will run for 2 hours starting with a 15-minute presentation from ENWL. We have two thematic sessions with a short break in between. Theme one is 'Preparing the Network to meet Net Zero at lowest cost to customers', theme two is 'Delivering world class service and ensuring no one is left behind'.

Our experience of the first three hearings suggests we might run slightly longer on the first session given the range of important issues that covers. The Challenge Group and the Customer Engagement Group will open the questioning for each of those sessions and then we will come to the Ofgem panel and wider participants for their questions.

Finally, just a reminder that the focus of today is ENWL and their business plan, not the wider regulatory framework or the Challenge Group or CEG report so please prepare your questions on that basis.

So, hopefully that's all clear and I'll now hand back to you, Martin.

Martin Cave - Ofgem – Chairman - opening remarks:

Thank you, Steve – and let me add my welcome to you all.

We're all acutely aware of the current situation in the gas market, largely reflecting the awful events in Ukraine.

These cost pressures are likely to persist for some time, and clearly there are going to be huge challenges for households across the country. The government, Ofgem and the industry have the responsibility to do what we can to protect consumers.

This requires us to make decisions that work towards a greener, more affordable energy system, that will protect us from the price shocks of tomorrow.

The ED2 price control provides a great platform for us to do exactly that. The local distribution grids will sit at the heart of the energy system transition. This means new investment. We must also make sure we extract the most value out of the existing infrastructure and tap into the potential offered by new technologies and flexible resources such as EVs and battery storage.

Later this year, it'll be Ofgem's responsibility to make determinations on the essential services the networks will provide over the five-year period to 2028, and what customers should pay for them. This will require a careful balance ensuring investment is made in the right place at the right time and for the right price. Price controls are a complex business. We must try to simplify the process and make it more accessible to the people that matter; the customers and users of the network, and the wider stakeholder community that represents their interests. That's the purpose of the open hearing today.

Extending the discussion and making sure that collectively we have the opportunity to scrutinise the spending plan the company has proposed and I'm very grateful for you for coming to participate.

We at Ofgem have many opportunities to meet with companies and we would like, today, to witness as full as possible a dialogue between the company and the stakeholders.

Now, having said that, I now hand over to Peter Emery at Electricity North West for his 15-minute presentation.

Peter Emery – ENWL

Thank you. Good morning, everyone and welcome to this hearing. You can see on the video, I'm joined by three members of my leadership team: Steve Cox, Stephanie Trubshaw and Paul Bircham, and so let's move straight into the charts. Go to the next chart, please, Jonny.

So, I don't want to spend too much time dwelling on the past, but I think before we - before we move into what our plans are for ED2 it's worth spending a bit of time on our track record.

This slide tries to summarise it all. We're the only DNO group that's been green in all Ofgem ratings for the past five years in a row, so consistent performance is what this business has been all about, and some of the highlights are on this chart - we were judged to have the most efficient business plan going into ED1 and we are outperforming that plan, so we're one of the most efficient DNOs coming out of it.

In fact, even though it's the most efficient plan, we've managed to work hard to improve our performance.

We have delivered savings of £166 million over ED1 to date and we have reinvested £72 million of that in new initiatives to improve our performance and the balance we will be sharing with customers - so this is an efficient business.

In addition to that, we are the most reliable DNO. We'll talk in a bit more detail as we go into the charts coming forward, but outside of London, we have the most reliable network and we are a West Coast DNO with a varied geography, mountainous national parks and a major city.

And building on most reliable, we have worked hard in ED1 to really try and reduce worst served customers. We made a commitment - the only DNO to make a commitment to reduce worst served customers from thousands at the start of ED1 to zero, which we are - which we have delivered.

There's still more to do and that'll be a theme in this presentation because there is an unequal distribution of quality supply across our region. If you live in Greater Manchester, you'll on average have a power cut once every 10 years whereas if you live in Cumbria or the peaks, you'll have a power cut once every 15 months, so broadly 7 times poorer supply.

If we look at innovation, we turn ideas into commercial reality. We're one of the few - in fact the only DNO - that's really turned an innovative idea into commercial reality which is CLASS, which provides services to National Grid for grid stability and has done now for three or four years and Smart Street, which is a major part of our proposal for ED2 that will reduce costs for customers.

And in fact, we also have patents out on some of our innovations which are attracting global interest. And finally we have the most advanced digital network management system in Europe. This was commissioned in September and has had stern tests through the recent storms this winter, but it's an excellent platform to build on for ED2 as the pace of decarbonization quickens.

To actually achieve that, it's not just about putting in a new system, there's a massive amount of work associated with data cleansing, and we've had a comprehensive process to cleanse our data, which enables the digital technology to work efficiently.

Next slide, Jonny.

So, I'll focus on this presentation in these three areas - these three areas actually do form the heart of our business plan and the rest of it is very much integrated into these - into these three categories, so let's move on to look at that in a bit more detail.

So, ENW is the smallest DNO and to - what we've done is to strive to turn this into an advantage. So we focus on being agile, innovative and disciplined in our approach, but also collaborative - and why do we do that? We do that primarily to deliver for our customers both in the Northwest and across the UK.

If we innovate and push boundaries our customers benefit in our region, but also it moves the whole industry forward. But we also do this to remain competitive in the sector and as a small DNO we cannot rely on economies of scale, we really have to innovate.

You'll see as we go through the presentation and hopefully the questions this morning that we are - we have got an ambitious plan, we are striving to lead in all the level - in all the areas I've mentioned on this slide. I'll go into detail on cost to serve, leading network performance and price offering and I'm sure we'll get chance to talk about efficiency and innovation.

The levels of ambition are interesting. We have an ambitious, well thought through plan for DSO, but we've also got a comprehensive set of initiatives that really came from our comprehensive stakeholder engagement process, which has also been supported by a sophisticated triangulation approach and also the use of social return on investment, and I'm sure we'll come on to that as the morning unfolds.

But I think it's important to say at this stage we've got some of the highest - highest proportion of fuel poor customers of any DNO in the UK, and therefore cost is critical, but it's not a constraint to providing value for money and this, I think, is the theme of the work we've done for our - developing our business plan and what we're trying to do here is combine sector leading performance with sector leading costs for the benefit of all.

So, moving to Net Zero, I'll start at the bottom, decarbonizing our own operations. Our plan contains a very clear - very clear targets, science-based targets to improve our own performance. We aim to decarbonize by 2038 when - this is consistent with the major stakeholders in our region and we think it's the most cost-effective way to move our business forward, but also set an example to those that we work with.

In terms of capacity, one of the major features of our plan is to provide a provision for network capacity, and we'll do that through our DSO. We'll have time to talk about that, but we've got lots of sophisticated modelling techniques such as ATLAS and ROCBA to really understand the capacity of our network, use flexible services and provide infrastructure as a last resort, but driving down the cost of providing that capacity is a big feature of the plan and finally supporting customers towards Net Zero.

We had a very consistent theme throughout our stakeholder engagement process. Consumers wanted us to take the leading role in Net Zero and, put succinctly, that means providing low cost, quick and simple connections, fulfilling a role of trusted advisor, providing impartial views on technology and no-regrets

decisions, which has come through time and time again, and it's something we've been involved in increasingly over the last two to three years.

So, reliability - just to touch on some highlights here, you'll see top left unplanned customer interruptions - our network was second behind London. It's been broadly consistent over the last five or six years. We are a high performer in this area, which, given our varied geography, is something that we're proud of.

On unplanned customer minutes lost, the latest data for last year - we're at the cusp of 1st and 2nd quartile, so again, very consistent over the period but we don't just deliver on CIs and CMLs through automation, we get the basic nuts and bolts right as well by continuous improvement and risk

management across our asset base and you can see the graph, bottom left, shows the number of faults that ENW and all the other DNOs have sustained, percentage wise, versus a start point in 2011.

And you can see throughout ED1 to date, we have slightly reduced our number of faults, and that's because our objective was to maintain - was to actually broadly maintain the risk basis of our network and that is what we've achieved and it's maintained an industry-leading position.

So in our plan we've proposed, from this leading position, to improve still further by 20%, there's no upfront funding in our plan for this 20% improvement.

It'll be funded purely by the incentive scheme of IIS if we are successful, so there's nothing to fund this, we're relying on delivering and securing incentives. Having said that, our plan also has an additional £40 million in there because our experience is IIS does not meet the needs of all our customers.

For customers in more rural areas in smaller communities IIS is not - is not cost effective and we're trying to level up the quality of supply performance, so that is in our plan and I'll be happy to discuss that later.

On vulnerability, we've got a comprehensive plan built on four pillars, and that's based on customer and stakeholder feedback, all of which is justified on social return on investment. It is a wide-ranging plan from Smart Street which is a radical initiative to reduce customer costs, the other side of the meter and, in fact, on a customer-by-customer basis, this could almost save the similar amount as our total - as our total bill for the year.

So if this - if this is rolled out, the savings will be significant for customers, and surely the time is right for such innovative thinking. We've focused on reliability for those in vulnerable circumstances, hence the additional £40 million I talked about a minute ago, we're going to focus a lot of that in areas of high vulnerability.

We've done a lot of work on fuel poverty, as you might expect, working with other utilities in the northwest and it's, again, a major part of our plan. We're doubling our capacity to provide support, and we're also building on our work on the Innovation Fund, which has worked very well in ED1 - it gets local communities more involved in working with us on solutions and coming up with innovative ideas and we're trying to encourage more of that through our engagement and collaboration with the communities that we serve.

And finally, we're trying to continually improve and change our culture. A lot of training for colleagues to help them recognise and support those in vulnerable circumstances.

So, our plan really does lead on ambition and value. Broadly speaking, we tried to keep our business-as-usual costs from ED1 flat or down in real terms, and that's what we've achieved.

The only increase in spend is in two areas, which is the Net Zero transition, which is the dark blue arrow on the right, and new stakeholder requirements or customer asks which is the lighter shade of blue in the centre of the - of the document.

So, if I work from left to right on this chart, we start ED2 with a saving of more than £300 million through our load related investment and smart flex benefits - we've got £95 million of efficiencies versus our ED1 endpoint. There's an additional £75 million of cost of doing business, and you can see things you might expect in there with cyber resilience and running a smarter network in the digital age. But the two - the two areas where the cost has come is Net Zero, but also stakeholder wants and needs.

All this is discretionary, the £220 million, if you wanted a cheap plan, a lot of this £220 million would not be in it, but our view is, this provides excellent value for money for our customers and in fact, when you look at the position overall we are – it is a competitive offer.

So our plan is comprehensive, it improves performance in all settings. What this chart tries to show is that – really, the breadth of the proposal that we put in place, covering our urban customers through to rural and the three elements, Net zero really covers everybody, but there's focus on unlooping in suburban - unlooping services in suburban settings and LV monitoring, but also strategic reinforcement.

You look at asset replacement and IIS improvement predominantly will make a return in the suburban and urban settings, but where we feel IIS fails to meet the needs of customers, we put in extra work in the rural area for worst served customers and customers in vulnerable circumstances.

And at the bottom, supporting electricity users in vulnerable circumstances, high rise buildings in urban environments, but also, as I've mentioned in that - in the more rural and remote locations. We've also got some specifics to address PCBs in transformers and our rural transformer programme.

So, to finish, as I said towards the start the presentation, cost is critical, but it's not a constraint in providing value for money. We produced our draft business plan which we tabled with full stakeholder and customer support. We based that on the fact that majority of customers were willing to pay, through the consultation process, the feedback we got from important stakeholders was - they liked the scope, but we needed to get the cost down, so we've worked hard.

Our final business plan is £200m down on our draft and we've done that through greater efficiencies, use of uncertainty mechanisms and - and we've removed a certain amount of scope and you can see on this chart, in the eyes of the customer, it is a competitive plan.

The ENW billing cost to serve is the most competitive of all the DNOs, which we're very pleased about but it delivers significant value for money, so it's an ambitious and competitive plan.

Thank you.

Martin Cave – Ofgem

Well thank you - thank you, Peter, for that presentation.

We're now going to have questions on the first theme - Preparing the networks to meet Net Zero at lowest cost to customers – and opening the questions we have Bob Hull from Ofgem's own Challenge Group.

Steve McMahon – Ofgem

Have we lost Bob? We lost Bob. Do you want to start with, maybe, the Customer Engagement Group while we try and reconnect Bob, so Jeff?

Martin Cave – Ofgem

That's a very good idea. We'll start with Jeff from the company's Customer Engagement Group, if Jeff's ready and willing.

Jeff Halliwell – CEG

Yes, yes indeed - thanks very much. First thing to say is that I am COVID positive, so I hope that my voice - I feel fine, I feel better than I sound, so if - but if my voice gives out on me, my apologies.

Probably worth saying a couple of very short introductory remarks - the Electricity North West CEG was one of the first to be set up, so we provided continuous constructive but pretty robust challenge to the company over many, many hours of engagement with them and with other stakeholders.

So the plan which they're now putting forward is pretty heavily influenced by our challenges, but we do have some outstanding which we've detailed in our report, and we will articulate some of those this morning.

It's worth reminding those present on the call that our role and that of the CEGs is not to endorse, or otherwise, the companies plan. It's rather to critique, scrutinise and provide assurance that it is being driven by consumer and stakeholder requirements. Broadly, we can provide that assurance.

So, I think it's worth, in the context of Net Zero - in that context, noting a couple of things.

Firstly, although broader stakeholders see Net Zero as a major priority, Electricity North West consumers do not articulate Net Zero as their first priority – rather, they see reliability as their first priority, and that's why it was very pleasing to see it called out in the - in the presentation and in the plan this morning.

And that emphasis on reliability was before the chaos caused by Storm Arwen, which we will touch on in the second part of our questions.

To come to the two questions and I'll - perhaps I'll ask them sequentially in the interests of time, although they're quite different - first is around workforce resilience and deliverability, so there are - because of the wide spread of uncertainty mechanisms, there's a very broad spread of workforce requirements which are articulated in the plan, but these will be critical to transition to DSO in particular, and will require delivery of the - very challenging, which you've set yourself, great - diversity and inclusion strategy objectives.

How can the company be sure that it will be able to fulfil the volume and the range of skill requirements in the more challenging workforce scenarios that you've articulated, particularly in an environment where other DNOs are likely to be doing exactly the same? That's my first question and second question, very different area, is around network losses.

So until there's complete decarbonization of the UK's electricity supply, losses will form a major, if not the biggest, part of ENWL's carbon footprint, so critical both in terms of environmental performance and also keeping customers' bills down. The business plan recognises this, but it really doesn't quantify the broad range of upward and downward pressures which impact on the level of losses and indeed, you have to go to annex 14, page 22 to find the quantification of the ambition here, which is up to 8 gigawatt hours.

So, how can we - how can we have confidence that that target is ambitious and is financially and technically achievable?

Peter Emery – ENWL

OK, well, I'll answer the first question and then one of the team – in fact, Steve - will answer the second one.

In terms of resourcing, our plan basically budgets for an additional 400 employees and we also assume an extra 600 contractors, so this - this blend gives us quite a lot of flexibility and it should - we're fairly confident that even in the low case the 400 increase – the 400 increase in employees is a robust planning basis and the use of contractors to manage the upside is the best way that we think that we can manage this.

We have long term relationships with our contractors and therefore we have shared these plans with them and over the period of time, if we see growth start to gather and increase, then we'll be well placed to capitalise on that.

So I think our - our plans are in good shape, we've already started recruiting now, ready for the start of ED2 because some of this is not just about volume, some of this is about skills and you mentioned DSO, which is an important part, and perhaps if I hand over to Steve, just to talk a little bit about the DSO skills and where we are before we answer your second question.

Steve Cox – ENWL

Thanks, Peter. So, I think just to backup Peter's point, I mean, we - we have seen in the technical skills, there is an increase in apprentice recruitment, for example, and an increase in adult upskilling. So we're confident that we can meet the field resource requirements.

In some of the more specialist areas, such as DSO, where we're looking at modelling skills and looking at commercial skills, we've been very successful in recruiting from the market and expanding the team in the last 12 months. Well, there are around 40 roles that need to be recruited in the next 15 months. The market for those skills is quite buoyant in and around Manchester, which is where the DSO team are based, so we're - we are confident through the normal recruitment process for those commercial skills that we're able to secure the people we need and our retention within the team is excellent - we lose very few people from within the – within the DSO area.

OK, yeah – just to move on to your second question on losses.

The losses, I think - it's important to get at what's at the essence of the losses discussion. Losses are effectively energy that's used in the transportation of electricity and as the region decarbonises through EV's or more renewable generation, more power will flow around the network and network losses will rise at - all the time, inevitably because of that - because of that movement.

It's important when we look at reducing losses that we look at the cost benefit of that, so, it is possible that - and we did do it in ED1 - where we did - we changed many transformers in our ED1 programme, where there was a strong cost benefit for customers in reducing the losses on those specific assets. We've pretty much come to the end of that investment programme and whilst we have identified some opportunities in ED2, they mainly centre around when we expand the network or intervene in the network for, say, asset replacement that we install low loss equipment at that point.

So, whenever we take any investment decision, we look at losses as part of our cost benefit analysis and that - that CBA model is a really important lens because it encapsulates all of the values of the whole system approach, customer value delivery for them and it really underpins our commitment to our licence obligation, which is to always act in customers' interests.

So, where that clearly shows that additional expenditure to reduce losses is justified then we've included that in the plan.

When there are better things to spend that money on that offer a better value for customers, we've redirected the funds elsewhere, within that overall affordability challenge that Peter set out, particularly given the current crisis around energy prices.

Jeff Halliwell – CEG

Can I just push you on the 8 gigawatts - or up to 8-gigawatt hour reduction target, though, Steve?

So how - how is that - the annex is a very intelligent reflection on the issues, but it's not - really not clear how that target has been arrived at.

Steve Cox – ENWL

So that target is effectively when we look at what we expect to invest in, in the programme and we use this opportunist intervention model – so, for example, if we're changing a power transformer, we can invest in a low loss unit. If we look at the number of occasions we do that in the year - in the programme, and then we look at the benefits of that, that tots up across the entire investment programme to the 8 gigawatts.

Jeff Halliwell – CEG

OK - I think it would be very helpful if that's, you know, that – well, first of all the trajectory towards eight and the reasoning behind - why eight - not six, eight, twelve or eighty - is arrived at - anyway, I'll pass back to the Chair. Thank you.

Martin Cave – Ofgem

OK, thanks, everyone who's asked or answered those questions. I'm not quite sure how we stand with Bob Hull – is he with us now?

Excellent - if there are no supplementary questions from the Ofgem team on what we've heard so far, I'll hand over to Bob.

Bob Hull – Challenge Group

OK, thank you very much. Good morning, everyone, apologies for the IT problem.

If I could ask you about your expenditure, your bid has come in looking for about a 30% increase from your current run rate and if you add uncertainty mechanisms, that's about a 50% increase in real terms that you - you're asking customers to pay.

And your underlying expenditure, if we take, sort of, load related expenditure out of it, it is going up by about 30% and I'd like to sort of focus on one area which is the non-operational costs, so the costs of business support, engineering support and so on - yours appear to be the highest of all DNOs, so I suppose two questions, you know -

Why are you - do you appear to be an outlier on this, and then why haven't you been able to control these costs to current levels and deliver value for money for customers?

Peter Emery – ENWL

OK, so I will - I'll talk about the philosophy behind it and then I'll hand over to Paul Bircham to talk about that in a bit more detail.

This is the area where we have really sought to deliver value for money, not just a cheap budget. If you look at the stakeholder feedback that we've got, the triangulation work that we did, the customer needs and the social return, quite a few of those costs are in this area.

So, they are new activities that customers want and that we think provide value for money and that we're best placed to provide, so we don't agree with your contention that just taking down the cost versus ED1 is the right approach.

There are several other - several other categories in this area beyond customer needs that also are critical to the plan.

So if I hand over to Paul, he can take you through some more detail.

Paul Bircham – ENWL

Yep, happy to do that. So, I think, Bob, we may mathematically have the largest increase in these areas of any DNO, but that doesn't necessarily mean we have the largest budget.

It also factors in that we start from a low base because we have been driving down costs very effectively across the ED1 period and the growth is all due to material new items. There is an underlying reduction in our ongoing costs.

If I could detail some of those for you - in the business support area, the growth comes in three major areas - that is our enhanced data and digitalization programme, which is required to support the transition to Net Zero, enhanced and new costs for cyber resilience and the new training costs required to support the expanding workforce that we talked about just recently with Jeff.

In the indirect area there are three big items again - the cost of establishing the DSO function, which we've already talked about, the cost to support our ambitious vulnerability package and the costs to support the additional design, project management and procurement type activities that enable the enhanced activities directly on the network. So, we have a lot of increased expenditure on load related activities to increase capacity on the network, but that all needs to be designed and project managed to make sure it's delivered efficiently for customers. So, those three cost items come in there, they are new and material and then in the non-operational capex we have the first replacement programme of our inventory of smart devices and the decarbonization of our fleet and offices.

Again, new - new challenges that we're facing. If we strip out those costs from this area, you will see that the ongoing efficiency assumptions drive down the underlying cost base.

Bob Hull – Challenge Group

I suppose, just to sort of follow up on that. I mean, you say that you've – well, you have underspent your allowance in ED1, aren't you just asking for the money again in ED2?

Paul Bircham – ENWL

No, I don't think that's the case at all.

So, these are ongoing year on year costs that we have driven down to be efficient and our commitment into ED2 is to continue to drive those costs down year on year and we've made the biggest commitment of any DNO to improve our ongoing efficiency.

But on top of that, as I've identified, there are new challenges and new requirements and new things that our stakeholders and customers want us to deliver, so we are not coming along and asking for our cost base to rise but we are asking for new things to be done, our scope of work to increase and our ability to deliver additional value to our customers and stakeholders to be enhanced.

Peter Emery – ENWL

Sorry, Robert – I'd just like to add to that, actually - we have made significant savings in ED1 but we've reinvested, as I mentioned in the introduction, £76 million of, effectively, what could have been shareholders and customers money to try and improve our business performance.

I think if you had seen that our business performance was not delivering outputs, not delivering a first quartile performance in reliability and faults, not delivering a nine out of ten plus customer service, then you might have a point about making savings but not delivering on quality of service and outputs.

That is clearly not the case in our business.

Bob Hull – Challenge Group

No, I mean, I'm not commenting on your performance during ED1. I mean, clearly the incentives are there for a purpose to drive this.

My question is really - and ultimately it's for Ofgem to look at - is there - some of these savings, have they been simply moved into and deferred into ED2 and you know, clearly that's an issue for, sort of, Ofgem to examine as part of this work.

I mean the other comment I -

John Crackett – Ofgem

So, may I just follow up with a specific example of that? If you look at the big-ticket items of non-load, one of them of course is your asset replacement and refurbishment which you're forecasting to underspend by some, you know - you only spent about 65% of that in ED1.

One would intuitively expect with a distribution of asset age and a fairly constant replacement, you know, we would expect - and you've already stated, Peter, that your strategy is about maintaining network risk rather than enhancing or reducing it - so one would intuitively expect, bar inflation and cost increases, that the run rate would be somewhat similar on the network before you start to enhance and increase it. And yet, this is, you know, about £300 million and the run rate is increasing by some 20%. How would you explain that?

Paul Bircham – ENWL

I'm very happy to take that question, John, and the - the focus that we've had during the ED1 period has been to maintain that risk at a constant level.

In fact, in the - in our ED1 business plan, we committed to a small increase in risk, so we were going to let the overall risk level rise a little bit.

But what we've achieved is actually a - holding that constant. So, on that basis, I think we've outperformed in terms of our delivery during the ED1 period. What we've also looked to do is to deliver that risk reduction in the most efficient way possible and we've innovated, we've changed the way we do things, we've brought in new techniques, we've reduced the costs of interventions, and we've designed things really cleverly to enable us to do that.

And we've got ahead of the delivery of that programme of work and we are on target to deliver it all by the end of ED1 and we've shared the benefits of doing that more efficiently with our customers. As we go into ED2, our assets continue to age and new assets move into the space where their condition requires their replacement.

So this is not a function of saying the asset base is a constant and therefore a constant level of expenditure will deliver a constant level of risk.

We constantly monitor the condition of all of the assets. We assess how their age and deterioration will affect their performance, and we intervene on them just in time to replace them before they have a catastrophic failure that affects customers.

And as the assets age, how that condition worsens - the time for replacement of those assets becomes due and it's based on that assessment of asset condition and the time for that replacement to come due that drives the programme. It's not a surprise that an asset base that was installed, largely, in the 1950s will have an increasing replacement requirement over time and we are doing that as efficiently as possible, but the turn rate on our assets is not one where we are replacing a proportion of the asset base at each price control such that everything is constant. Over time, asset replacement is inexorably rising because the overall age of the asset base and the condition that stems from that is continuing to increase.

Akshay Kaul – Ofgem

Well, can I just press you a bit on that?

Have you deferred any asset health expenditure from ED1 to ED2, which is responsible for a proportion of your underspending in ED1?

Paul Bircham – ENWL

No, we haven't done that. What we've done is work out a programme that more than delivers the commitments we made in ED1 and delivered that really efficiently.

Akshay Kaul – Ofgem

OK, and then the second thing you were saying is that the reason that your overheads and business support costs are going up is because there is new activity but if you strip out the new activity, the underlying unit costs are actually going down between ED1 and ED2.

I think it'd be quite useful for us, because I haven't seen it in your spending plan - for us to see the numbers on that - your analysis of the underlying unit rates and how they're changing between ED1 and ED2, but the three things you mentioned, Paul, I mean, to be honest, the first one I can sort of understand - where you're creating a new DSO function, so there will be some costs associated with that.

But the other two that you mentioned felt like they were just ongoing BAU activities, which should just be absorbed within your normal BAU operating budgets.

So, can I just press you on that? Can you explain why that - you're classifying that as a new activity and why that leads to an increase in cost?

Paul Bircham – ENWL

Yes, certainly so – I gave a list of eight items, so was there a particular couple that you wanted me to focus on? I can go through each of the eight.

Akshay Kaul – Ofgem

Well, I think, for instance you mentioned your vulnerability strategy. I mean, you've got a vulnerability strategy in ED1, this is a core part of your operations.

It's not - it's not obvious why your underlying costs on that should be going up.

Paul Bircham – ENWL

I'm very happy to take that one, Akshay. Yes, so Steph may want to come in and explain in more detail but the key challenge we're seeing in ED2 is the need to support more customers who are in vulnerable circumstances and provide greater support for customers in fuel poverty and we have been scaling up our capabilities to do that through the ED1 period. We've built a really effective network of partners to help do that and as we move through the end of the ED1 period, we are ramping year on year our capabilities of - capability to support.

As an example, in ED2, across the period, we're looking to massively scale up the support for customers in fuel poverty such that we will be able to provide support for all 250,000 customers who are identified in the Northwest, at the moment, as being in fuel poverty.

Now we think this is a base level requirement in ED2, but it is a significant scaling up of our current levels of activity, and it's a base level requirement because the latest data shows us that the current fuel crisis, the impacts of the pandemic, are all driving more customers into this difficult situation, and so the need for this support is growing hugely.

So, we are seeking to make a massive step up from the support we've been providing in ED1 and trying to reach all customers who need it across ED2 and that is a new scale of vulnerability support and therefore it's a completely different programme of activity that requires a lot more expenditure.

Martin Cave – Ofgem

I think I'm going to ask Bob to ask his second question and could I ask you to be slightly more concise in your answers if you'd be so kind.

Bob Hull – Challenge Group

Yes, thanks very much. So my second question was about DSO and you've set out, as you've explained earlier, you've set up your cost and benefits for DSO, and as I understand it, there's costs of about £36 million over the ED2 period, and you're showing net savings of just over £200m but only £11m of those savings that you've set out are for contracts for customer flexibility services and I suppose I had, sort of, two questions around this.

Firstly, you know, why is your target or expectation for non-network solutions so limited with the work that you're putting into it?

And my second question is about the other savings that you identified from deferred or replaced need for network investment. How confident are you that that number of savings is accurate?

Peter Emery – ENWL

Let me pass this question on to Steve Cox, our DSO director. Steve?

Steve Cox – ENWL

Thanks, Bob, I'll take the confidence factor second, if that's OK.

So in terms of savings, we're talking benefits around £248m and as you correctly say we identified cost just a shade over £36 million.

In relation to flexibility, our challenge in our duty to customers is not to necessarily support flexibility markets as an end in itself.

It's to do the most efficient thing for customers. Customers have already paid for billions of pounds of assets over various price controls that are in the ground now and in substations and the most efficient way to make capacity available to customers is to maximise the capacity of those existing assets. A lot of our innovation programme throughout the late part of DPCR5 and ED1 looked at initiatives such as Smart Streets and Celsius, and our connect and managed approach for EV connection, for example, shows how the DNOs can release very significant capacity to meet the Net Zero challenge from their existing assets, so that - how does that manifest itself?

So, through enhanced modelling, through enhanced sensing on the network to measure the actual power flows in real time, we can eke ever more capacity out of those assets. Celsius, for example, looked at active temperature managing to increase the rating of transformers.

So, the majority of those benefits actually flow from using existing assets in smarter ways. So, for example modelling in sensors - sensors alone account for £50 million of benefit release in relation to what they – what they offer to customers. How does that feel on an LV feeder on a housing estate?

We're monitoring the actual power flow using smart meter data to refine that down the feeder section and eking every last bit of capacity out of that feeder before we intervene.

When we do intervene, we have a flexibility first strategy, so we've identified over £11 million of benefits which we think we can readily secure from flexibility.

All of our capacity requirements have been put out to the flexibility market for the entire ED2 period, and we will always tender for flexibility where flexibility or assets are needed, but if we release capacity from existing assets, that is always, in our analysis, the cheapest solution.

If capacity, it does need to be created - we go to market for flexibility for all demands above 200 kilowatts, which is quite small demand - all that's been put out in the market already and where we have confidence in the - in the markets that they will provide that flexibility, we've included the benefits in our plan.

So your second one is in terms of the confidence of being able to deliver that plan but we're highly confident in the - in the ability to deliver –

Bob Hull – Challenge Group

So no, the question was about the confidence in your forecast of savings, that deferred network investment.

Steve Cox – ENWL

Yeah, so in - in terms of the savings it - we need to look at where the demand comes from. OK, so within our plan just over half of the demand growth that we're seeing comes from economic redevelopment in and around the Greater Manchester area and in the Northwest generally.

So, for example, with an enterprise zone at the airport, we've got extensive redevelopment and economic expansion of the City of Manchester and their other rapid expansion in their development zones, such as Salmesbury in Preston, so that underpins over half of the demand growth and we can see real connections. We can see real cranes in the sky creating that demand, we've studied the network in detail and we've submitted the EJPs for all of those network expansions that look at flexibility, look at the existing network capacity, so happy to talk about any of those but we're confident that those savings are real.

The other half of the savings arises from the growth of low carbon technologies, so both generation and demand such as EV's -

Bob Hull – Challenge Group

So sorry - sorry to interrupt. I mean, looking at your plan I suppose one of the comments that you make is that you expect heat pump expansion to be low, and it appears to be amongst the lowest of all the DNOs. Yet you show your peak demand growing at the one of the fastest levels of all the DNOs across the country and I'm struggling to, sort of, see how that that ties up with your comment, I believe, that your utilisation factors are going to increase.

I mean, what would be useful to know is how do you expect your network utilisation factor to increase from today to 2028?

Steve Cox – ENWL

So in terms of peak demand growth and utilisation factors, they are quite different things. So, for example, in a business area the peak demand may not be at the same time as in a residential area, so that's why it's really important when you look at load related expenditure and the benefits arising from the techniques that I've described, to look at the very specific problems on the network.

So, we have, for example, as you quite rightly said, for heat pumps, gone in at the lower end of the range so we're still within the range of the FES, for example, but the reason we don't think the Northwest will take off very quickly on heat pumps comparative to other areas is national - that is, relatively poverty is high in the Northwest. Over 96% of customers are connected to mains gas connections and the housing stock in the northwest is a poorer quality than the national average, so that indicates, combined with the affordability challenges in the region, that that transition to heat pumps, which at the moment are quite expensive, outside the social housing area, is likely to be slower.

Contrary to that, if you look at the expansion in EVs, we're seeing a very rapid expansion in EVs, and things like service unlooping costs have increased by a factor of five in one year alone. So, you see things like the fuel price crisis and the Net Zero debate publicly and really driving personal choices where people can afford to adopt technologies. We're seeing that and that directly drives demand, and that indirectly increases the savings through the techniques we've described.

Bob Hull – Challenge Group

So, I suppose my, sort of, question is more understanding, sort of, what - I understand the reasons for it, this just seems out of step with some of the other DNOs – from our comparison across them. So I mean, I appreciate that there's probably not time to go into this now, but I would suggest it's something that Ofgem might want to look at going forward, but you know, I appreciate your comprehensive answers to my question.

Martin Cave – Ofgem

I think it's I think it's time to move on to questions from other stakeholders. Could I make a further plea for a degree of slightly increasing conciseness of answers so that we have time to get through some of those. There are a lot of very interesting questions on the chat and we've got twenty minutes to look forward and to deal with those, so I'll hand over to Steve to organise this part of it.

Steve McMahon – Ofgem

Yep, so thanks Martin. I think first of all we're going to try and bring on Todd Holden from the Greater Manchester Combined Authority.

Todd Holden - Greater Manchester Combined Authority

Hi, good morning, everybody and thank you for bringing me in and the question. As a number of you will be aware, I wear a number of hats like lots of us but for transparency I should just inform attendees that I'm the independent chair of Electricity North West's sustainability panel. I sit on the Customer Engagement Group, but the hat that's currently keeping my head warm is the role that I have in my day job which is at the Greater Manchester Combined Authority.

So, my question as I put in the chat, follows on from the introduction in many ways. The business plan, its budgets and the deliverables were set some time ago without sight of the current energy price challenges and the security of supply issues that we're seeing, and particularly implications on this, both at the adoption of low carbon technologies, more of them and adopting them faster and the dramatic increase in customers in vulnerable circumstances - potentially a quarter of Greater Manchester's population in fuel poverty come October.

So, considering this paradigm shift that we've seen, how will ENW deploy its resources differently to meet these additional asks and still realise the business plan's objective to lead the transition to Net Zero and ensure that no one is left behind?

Peter Emery – ENWL

I'll kick off, Todd, to answer that question. I mean, one of the things that we've done in our plan - the big change between the draft and the final was a greater use of uncertainty mechanisms.

What we've tried to do is drive down our ex-ante ask to the absolute minimum that we think is likely to happen over the period, which then leaves, basically, money in everybody pockets, unless it's needed, which is really what these uncertainty mechanisms are all about.

Secondly, as I mentioned earlier, we'll be predominantly recruiting employees to meet that minimum anticipated demand, so to keep costs down, and then we will – we will use contract resource at the margin, if growth picks up.

One thing that we have found in our engagement over the last three or four months is that stakeholders still see Net Zero as critical and in fact what it does is it means Net Zero is still very important for us to deliver, it's a critical – critical to our plan.

But to do this at low cost is also absolutely critical and you can see how we responded taking out £200m between the draft and the final business plan and the position of our plan versus other DNOs in cost to serve - we take cost very seriously, and in fact, as I mean, in our day jobs, we see - we see the vulnerability and poverty in our patch, so we take cost very seriously.

Paul Bircham – ENWL

I think just to add, I think - it means that we have to increase our commitment to deliver Smart Street in areas where it can really make a significant difference to customers' bills where they're really struggling and our ambition to roll out our support for customers in fuel poverty needs to be very targeted, but it needs to scale up as we've talked about earlier to meet these new challenges.

Peter Emery – ENWL

I think it's highly likely that we will front end load the plan in these areas because of the particular circumstances.

Martin Cave – Ofgem

Todd, are you - are you happy with that? Any supplementary?

Todd Holden - Greater Manchester Combined Authority

I think the front loading of the plan is a - is a positive step, I'm just wondering whether or not the budgets set within the uncertainty mechanisms are large enough, considering the scale of the challenge that we're likely to face over the next 5 to 8 years.

Steve McMahon – Ofgem

Thanks, thanks Todd. We're going to come to Helen Stack from Centrica next.

Helen Stack – Centrica

Hi, thank you. So, flex procurements been pretty low for ENW in ED2, so my question is, firstly - what are you doing to encourage more flexibility service providers to come forward in ED2?

Secondly, how would you mitigate the risk that by your proposal to mesh the dispatch of ANM and flex services into a single system and merit order could always result in an – sorry – in an ANM first, flexibility second approach, which would have consequences both for the customer with the flexible connection and flex providers.

Peter Emery – ENWL

Yes, OK, I'll kick off but then I'll hand over to Steve Cox to talk a little bit about how our DSO will operate. Flexibility is a very important tool in our armoury, but it's not the only one and we have had flexibility contracts with major customers and we've done tenders on a regular basis but we're not prepared to pay a premium for flexibility. We're prepared to try and get the lowest cost to provide capacity, but we realise this area is under a lot of scrutiny and therefore we need transparency and we need open data and that, effectively, are the principles that our DSO proposal is built on.

So if I pass you over to Steve, he'll take you through some of the details.

Steve Cox – ENWL

Thanks, Peter.

I think I'd just want to pull out one additional point. I mean, we committed in our plan that the actual procurement of flexibility we - we don't think we are necessarily in the best place to do that.

So during ED2 we will actually outsource the procurement of flexibility to ensure that the most efficient market stimulation and the most efficient procurement takes place to get the price of flexibility as low as possible.

So there's a range of initiatives laid out in the planning, including engaging with the market, within DSO, we see the role of the independent panel, which is made up of stakeholders, including flexibility providers as being absolutely critical to - to guide our rules, to guide our selection criteria, and we've given that independent panel powers to change the rules and to even overturn decisions on individual investments, which – I think we're the only DNO to have done that.

We've also, for example, where we can pair flexibility against assets, we're holding the DNO to a fixed price.

So, if the DNO overspends it stops the DNO bidding low and overspending. If they do that, then that cost delta will be borne by shareholders, not customers.

To your second point on the interaction of ANM with the merit order management system, I go back to my point to Bob. Our primary duty is to act in the interests of customers not any market service provider and therefore where the Active Network Management is able to reconfigure the existing assets by moving network split points, for example, and that solves the constraint - that is the cheapest thing to do, it's virtually free.

Where that's not the cheapest thing to do, then we will use the merit order management system to check - to select the next cheapest thing to do in the stack against all of the prices submitted.

So hopefully that explains how the network assets operate effectively within the ANM, first, and then the residual problem is solved - that flexibility provides.

Akshay Kaul – Ofgem

Steve, can I just press you on that, because I think Helen's point was also about, you know, are you in danger because of a potential bias in favour of the ANM, because it's a technology that's run in house and you know it well, to in some ways foreclose the development of the flexibility market because you're not willing to experiment, at least in the early stages of that market development.

Steve Cox – ENWL

We're - we're very willing to experiment with flexibility. We've hundreds of generation customers who are signed up on flexible contracts, where they've received very significant capital reductions in the connection costs in order to connect to the network. So, we manage those routinely through our - through our ANM system. The ANM system isn't an experiment, it's a well - well proven technology and a key plank of all DNO plans in relation to their response to the challenges.

I think what we - what we have done in the ANM -and Peter referred to it in his opening comments- we've invested £25 million in ED1 on a state-of-the-art system that is capable with grid edge to central dispatch, in other words, directly connecting with things like EVs to help balance the network. So we put in place the infrastructure in our ED1 expenditure to really open up the potential for flexibility to solve many of the problems we will face, but that system itself also contributes to those solutions.

Peter Emery – ENWL

Just to add, Akshay, I mean, one of the reasons why we've got this – we've got this independent committee to really scrutinise what we do.

Our vision here is to have an open and transparent decision-making process where the decisions almost make themselves. You know, if flexibility is the lowest cost solution, it'll be pretty clear and that's the way it will go. If flexibility is not because other alternatives are cheaper then that will be pretty clear - it'll be transparent and it'll be visible. It's really as simple as that.

Akshay Kaul - ENWL

OK, and Pete you mentioned open data and again, can I press you a bit on that? So what – and if you can, as succinct and as simple a way as possible, you know, what is going to happen in terms of visibility of the devices and the flows on your LV network over the course of ED2 and what is going to happen to your capability of being able to predict how those flows will evolve and therefore to act as an intelligent purchaser of either ANM or flexibility services as a DSO?

Peter Emery – ENWL

Well, I think having built, installed and commissioned the digital network management system already, it puts us in a very, very strong position.

We're also commissioning the ANM element of that project before the end of this calendar year, so we will - we will go into ED2 with a lot of smart systems, but in terms of data openness and transparency – Steve?

Steve Cox – ENWL

So, in terms of the general principle around data transparency, all data that is not deemed to be commercially sensitive - and again the commercial sensitivity will be guarded by the independent DSO panel - will be published and made available in industry standard formats and in a variety of bespoke formats which we lay out in the strategy.

Martin Cave – Ofgem

I think we think we ought to move on to the next question.

Steve McMahon – Ofgem

Yeah, Helen, do you want to come back on anything that you've heard there before I come to Maddie Brooks, that picks up on this theme?

Helen Stack – Centrica

Yes, so I'm pleased about the additional transparency measures and some new DSO measures in the plan but I still think that there is a risk to automatically prefer ANM, so I'd like to see more transparency on that.

Steve McMahon – Ofgem

OK, thanks Helen. Hopefully we can come to Maddie Brooks just to pick up on that theme around flexibility and data visibility. Hi, Maddie.

Maddie Brooks – Octopus Energy

Hi, so yeah, my question follows on quite nicely to the, kind of, comments that you've given on commitment to improve data and transparency, but you intend to make new real time constraint and merit order information publicly available, which will be hugely valuable to, kind of, prospective providers of flexibility and kind of other stakeholders.

But how will you measure the impact that making this data available is having on alleviating and better managing constraints and how will you use both these learnings as well as bringing in stakeholder feedback to make sure you're continuously improving the data that's being provided publicly?

Steve Cox – ENWL

Yeah, thanks, Maddie. I think I would - I'd go back to the point about the critical role of the DSO stakeholder panel and we talked before about the sustainability panel and when we come to vulnerability later I'm sure Steph will reference the vulnerability panel.

There are absolutely critical to ensuring that what we do as a business is aligned to stakeholder requirements.

So all of the issues and effectively most of our KPIs - you'll see that in our DSO strategy a lot of KPIs are actually measured and quantified by our DSO stakeholder panel. So, that is the route in which we'll keep pace with what those stakeholders want. We definitely do not think we're the font of all knowledge, those stakeholders will innovate and come up with new solution methods that we can't even think about today. So, it's vital that we stay close to that population and they guide our actions in terms of increasing data transparency and so, for example, by the end of ED2, 95% of all of our customers on LV feeders will be covered by monitoring and that data will be enhanced by smart meter data and all of that will be available for the entire load profile across all of our 100,000 LV feeders for access to anybody who wishes to look for opportunities in that area.

Steve McMahon – Ofgem

Maddie, did you want to follow up on that?

Maddie Brooks – Octopus Energy

Yeah, I guess maybe just the beginning part of the question around, you know, understanding that, kind of, that data will be made available, but how will you actually be, you know, measuring that there's been, kind of, an improvement in, you know, flexibility services that are being provided to ensure that the constraints are being minimised.

Steve Cox – ENWL

I think the answer is, again, back to what Peter said, our challenge is to minimise constraints on the network not to necessarily minimise them through flexibility as the only - as the only solution. In some cases, for example, if we take Manchester Airport, the modelling shows very extensive expansion of EV recharging and an economic expansion of the enterprise zone. That enterprise zone will expand by something like twice the existing site demand, so it's unlikely flexibility will in itself be able to meet that requirement, and several technologies, including flexibility, are required to meet that - meet that particular demand, so it's important that we keep an open mind, but that mind is guided by stakeholders and the latest innovations and technologies, and those are continually fed into our decision models. That is the way we will deliver at the lowest costs for our customers.

Steve McMahon – Ofgem

OK, thanks, Maddie - we'll come to Dan Riley next from BP Pulse just on electric vehicles.

OK, I'm not sure whether Dan's able to unmute, so I think the question for this was - what provision has been made for the installation of EV charging points, especially high-speed hubs, as we see a dramatic increase in infrastructure requirements over the next five years. So, what - within this provision, what are your plans to ensure that they can be installed at speed and be responsive to meet rapidly increasing demand.

Peter Emery – ENWL

OK, well, we've done a lot of work on this, and in fact this is probably one of the biggest questions about where we set our load budget and where we put the cut off for the uncertainty mechanisms and we've also learned quite a lot from the Green Investment package that we've - that the industry's worked with Ofgem on over the last 12 months or so, but - if Steve in his DSO role does, basically, all the load planning, looks at the network planning and looks at our capacity and the pace in which we can deploy capacity - If I pass you to Steve he will give you a feel for the numbers.

Steve Cox – ENWL

Thanks for the question. I think - I think preparation to ensure that capacity is available through whatever means in time for this - in time to support EV expansion, it's really all about good planning and excellent stakeholder liaison and tapping into development plans so we take it briefly, but quickly, down.

I mean, I think there's been a very positive debate around motorway service areas and you'll see, you know, reading the public commitments, what we what we've done for that, we continue to do that.

For example, at other filling stations - we've looked at all 225 filling stations in the Greater Manchester area, we've sized what capacity we can provide for eight super-fast recharges at each of those stations, so we - they've not applied yet, but we've got pre-prepared plans that we can do, we've got the engineering solution ready.

More widely for business charging and the expansion of home-based charging we - we've got good spatial models in conjunction with the local authorities, so we work very closely, for example, with GMCA, we're well advanced on local energy plans in terms of getting those in place and 50% are now in place in our area.

That gives us excellent insight into things like what is the future of the car parking, what's surface strategy generally for transport?

So, this is where we need to and have included whole system thinking. So we look at integration with TFGM - Transport for Greater Manchester, for example. Where are they going to put tram stops? Where are they going to put Park and Ride locations? What capacity do we need to make, in what time scale, available for those location?

So that is what's fed into the ultimate manifestation of that, is our primary and secondary network reinforcement numbers that you see in the load related annex.

Steve McMahon – Ofgem

OK thanks, Steve. Martin, I'll hand back to you and if there's any further reflections, I think, from the Ofgem panel, otherwise we might wrap up for this bit.

Martin Cave – Ofgem

OK, yes, we're running a tiny bit late, so I think we might wrap up this first session and I'm proposing that, with your agreement - that we now have a very short 5 minute break and we resume on the second theme - delivering world class services and ensuring nobody is left behind, and we'll begin with the Customer Engagement Group - Bev Keogh and then and we'll hear questions from the Chair of our Challenge Group, Roger Witcomb. So, see you back in four or five minutes.

BREAK

Martin Cave – Ofgem

Welcome back.

As I've said, we're going to begin with Bev Keogh from the Customer Engagement Group - Bev, what are your comments and questions on this - on this theme?

Bev Keogh – Challenge Group

Hi, morning all. So, following on from the previous session, which touched on flexible solutions and also the fact that we know that Electricity North West's customers place a high importance on reliability through the engagement that was carried out during the business plan preparations - how can Electricity North West reassure us that flexibility and non-traditional asset solutions for improving reliability have been fully costed and consider – considered, costed and compared to conventional approaches when assessing the deliverability of network reliability improvements?

Steve Cox – ENWL

Thank you, Bev. I think when you look at improving reliability and Storm Arwen points to the need to do this, where loss of electricity caused - and not just in Arwen, but in the following storms this year - caused all kinds of problems for customers.

We need to look in a holistic way about how we improve resilience. So, flexibility in local power sources, local battery storage technologies definitely have a role, you know, we certainly deploy generation extensively and there's a role for that in the future, including the use of flexibility. But there's also a key role for innovation and I point to our innovation plan where some of the technologies we've developed, such as LineSIGHT, for example, is a new technology that's come out of the load programme, that actually allows us to see where faults are located on overhead lines in real time. So, sensors on the network could provide multiple purposes and effectively give us a fault radar.

That improves the resilience of the network in that we're much more able to effectively direct our resources and thereby restore supplies quickly, so in looking at that reliability expenditure, it's not just about network hardening. We saw on Peter's charts that the number of faults is falling as we continue to invest and target our investment tightly and efficiently in the network, but it's using all available clubs in the bag to improve that at lowest cost for customers.

So, it's through innovation, it's through flexibility, but it's also through good engineering practise in a number of occasions.

Bev Keogh – Challenge Group

Thanks Steve and I wonder, then, whether the plan may benefit from some greater clarity on that point just to knit together what you've said, so thank you for that and then moving on to the theme of consumers in vulnerable circumstances. So, Pete, you shared that, you know, that this is a key category of Electricity North West's business plan in terms of supporting consumers in vulnerable circumstances, and we've already discussed in, you know, Todd's question around an anticipated increase of about 25% of consumers in vulnerable circumstances and in your - across your whole licence area.

So in the short time though, since the business plan has been submitted, we know the Northwest has suffered from the impacts of the severe storms in quite quick succession, and you know, notwithstanding the knock-on effects of the Russian invasion of Ukraine and the fact that that's compounding the already significant increases in household energy costs.

So what capability is there really within your business plan to adopt to these significant change in circumstances and any others that, you know, could or are likely to follow during ED2 to ensure that there is ongoing, relevant and critical support for consumers in vulnerable circumstances across your whole licence area, when situations like this arise?

Peter Emery – ENWL

OK, I think some words of context would be helpful, which I'll come up to and then Steph will go through some of the detail. When we went through our stakeholder engagement process and we were surprised and encouraged, actually, how many consumers in the Northwest were happy to pay more money on their bill to support fellow citizens in vulnerable circumstances, and it was a very clear and consistent message. So - and that's - it comes back to why our plan has got more of it in - we've done more for vulnerable customers as ED1 has progressed because if you like, we've been successful at it, it's worked well and there's been a demand for more, and our customers are seeing that.

And one thing we can be sure, is that we will be supported by consumers in the Northwest in trying to support customers in these sorts of situations. So, we stand from a position of confidence in terms of we know that our customers value the support that we can give and a lot of the work we've done has tested whether we are either best placed to do it or we're best placed to collaborate with partners who are best placed to do it so - so that is the basic philosophy behind what we're trying to do, and I think that really helps us - really helps us leverage our capability for unintended consequences. COVID was the start two years ago and now we've got a cost-of-living crisis. So, if I hand over to Steph with some more specifics.

Stephanie Trubshaw – ENWL

Yeah, thanks, and I think it's really key that the partnerships and the networks we've created really feed into this and they - even things like the Utilities Together Forum where we all work together, investing into the Northwest community, which is fundamentally supported by our stakeholder advisory panel, to revisit everything each month or every year or look at the change in horizon and ensuring that we carry on with research and our innovation fund is out there to find new ways of working to increase the social return on investment so we can keep reaching more and more customers.

And that is a key point for this plan, we know more customers are going to need support so we need to learn, every year, how to be more efficient and use innovation to reach more customers than what's actually in the plan originally, and we've proven that successfully in ED1 and that is through our great partnerships, advisory panels and in the future with our future customer advisory panels, which was really good feedback that came through this engagement that we should have more customers saying what supports them and feeding into the changes we make. That will continue to allow us to reach more people but manage the costs.

Bev Keogh – Challenge Group

Yeah, no, that's great. Thank you.

John Crackett - Ofgem

Chair may I just follow up in this this area of customer service?

You've put in your plan an ambition to reduce interruptions by 20% in time and in number, which is good, but of course, as we know that's incentivized and it's an average.

So, what about worst served customers? Peter, you said in your introduction that you'd eliminated worst served customers in the ED1 period and then in your ED2 plan, I think you're proposing to increase expenditure on them from £1.3m to £20 million.

So, what is it you're going to do with the £20 million and what are the outcomes that worst served customers are going to see, given that you've just eliminated them all.

Peter Emery – ENWL

Well, eliminate is a - is an unfortunate word but certainly reduced to zero. Basically, the definition of a worst served customer is changing, so, so as standards and expectations change, the definition of a worst served customer is also changing and we need to respond to it.

We did respond in ED1 and, as I said, reduced them from low thousands to plus or minus zero.

If I look at my - if I look at the stakeholder engagement, reliability is critical. If I look at my CEO complaint bag, it's often from customers frustrated by their quality of service because they are fed by overhead lines through forested land and in remote areas, and we look at that quality of supply and it's - it is quite different than in - than in suburban Greater Manchester. So we want to do something about it, and there's £40 million in our plan, £20m of it is targeted at customers that meet the new worst served customer definition, to get that back down to zero.

But there are also quite a few particularly vulnerable customers that are exposed, that are not quite worst served but they're not exactly best served either, so our view was we needed to put some resources into this because IIS working on economics of the average, doesn't deliver. So that's why there's £40 million in our plan and that was in the plan before Storm Arwen came.

It's clear - and that's really to try and stop – stop supply outages during, if you like, business as usual events, there is a broader question, which I think we need to engage with Ofgem throughout this year, which we are doing - is the length of interruptions in extreme circumstances like Arwen - what more can we do? This plan at the moment does not change those resilience standards, so I'll need to make that very clear.

We're working to the existing standards with this plan, but we do look at low carbon and Net Zero reliability, the reliance of customers on a reliable electricity supply and we need to do more for those parts of our network where the quality of supply is not as good as it could be.

Martin Cave – Ofgem

Good, now, Bev - have you got any more questions in your locker?

Or shall I move on to Roger Witcomb? Ok, Roger Witcomb from Ofgem's Challenge Group.

Roger Witcomb - Challenge Group

OK thanks, Martin and good morning, everybody.

Just following on this theme of supporting customers in vulnerable circumstances and again getting down to some specifics, we were looking at the Priority Services Register, which is an important tool I think for you identifying who your customers in vulnerable circumstances are. I think you're currently - about 50% of eligible customers, you think, are on your PSR?

You have a baseline target of getting to 60%, which is still one of the lowest among all the DNOs and a stretch target of 80%, I think.

Now, I'm not underestimating the difficulty of achieving that, but which is the target? Is it the baseline or is it the stretch? What's the difference between them?

And sort of going along with that, what are you actually going to do to try to increase that number of - increase your coverage of customers in vulnerable circumstances through the PSR?

Peter Emery – ENWL

OK, thanks Roger. I mean it - yeah, our PSR lists are very important to us and that's been very much amplified through Storm Arwen and then Dudley, Eunice and Franklin, just recently. But what I'll do is I'll hand this question over to Stephanie Trubshaw, which is - which is really her area of work.

Stephanie Trubshaw – ENWL

Thanks - in answer to your first question, what is the target, Roger - I would love to say it's 80%, but it's somewhere between the two and the reason I say this is purely because there's some conflict, so one of the biggest reasons why customers do not join the PSR is because if they have good reliability, they don't feel they're at risk.

So, something like Storm Arwen creates an increase in, actually, people registering because they experienced power cuts. So when you look at the fact that Manchester customers experience an average power cut once every 10 years, they would need to join the PSR, it takes a lot more intervention, so we need to encourage and share more information and approach customers multiple times to get them to actually want to participate in joining the service, and when you use national statistics and you look at the average, even when you look at something like vaccinations that are given free to the country, you very rarely get over 70% uptake as an average.

So when you aim for a stretch of 80%, you are actually going into a high number whether you're doing a lot of work for low numbers to it, that's the same - so I would say that we would probably get to the range of close to 70% as our main base target we would want to, and be pushing ourselves up to 80% as far as we can, but there will be a significant difference in work in that last 10% trying to get customers to register, and I think the key thing for us is that it's not just about having them registered, it's about the quality of information.

And we've seen that again in the recent storms. Customers, once they're on the register and ensuring that their information is kept up to date and is actually - we can get hold of them - is as important as actually being on the register, because if we cannot get hold of you to support you and actually stay in touch with you because you don't need the service for multiple years, it creates a significant risk and for me the two factors that are important together are about the volume and actually, the data that we hold.

In relationship to how we're going to continue to getting more people on the register, that's all about how we work together with communities and all of our plans interact together so when we're working in communities, whether it's fuel poverty, we're in the whole community, creating trust and really focusing on the relationship and the brand of the energy industry, which is actually, you know, coming to an all-time

low with the energy crisis - we need to work with people, make them realise that we are trusted and there's a reason to join the register, that it's - we are there for multiple reasons to help them, not just that there's this service if you have a power cut, so whether it's low carbon technology, the energy transition - and use every multi-faceted way to approach - but there will be a lot more on the ground interactions between us and partners and the customer.

Roger Witcomb - Challenge Group

OK thanks. I mean, just as a follow up on that and I'm sure the information is somewhere in your plan, but I probably haven't found it - how much you actually going to spend on this activity of trying to increase your coverage, approximately?

Stephanie Trubshaw – ENWL

I think it's about £3m - I think it's about £3m across the period.
Because we will be leveraging other efficiencies from other parts of the plan as well.

Roger Witcomb - Challenge Group

OK, I'm asking the question because from everything you've said this is, for ENWL, it's probably more important than for most other network operators, given the number of - customers in vulnerable circumstances that you actually have in your - in your patch.

Peter Emery – ENWL

Yeah, I think the important point is - the reason why it's 60% is we're confident we can deliver on 60% so we make promises that we can deliver on. We think we'll get into - we'll get into diminishing returns of between 60% and 80%, and we don't know how far we can go so I think - I think that's effectively where we are, Roger, and I think the work on the example that Steph gave about vaccination rates, I think, it's quite informative. You certainly hit a certain level and then it becomes pretty tough.
As Steph said in Cumbria, South Cumbria particularly, we have suddenly got a lot more vulnerable customers recorded because of Arwen, whereas in Greater Manchester which is very resilient we have less of them, so that's something we've got to work on.

Roger Witcomb - Challenge Group

OK, I mean - just to say compared with other DNOs, 60% is pretty unambitious, and I leave that with you.

Peter Emery – ENWL

We understand that, thank you.

Martin Cave – Ofgem

Let me just check if there are any more, sort of, Arwen related questions?

Akshay Kaul – Ofgem

Yeah, Chair – if I could just come in briefly. You mentioned that you're not upgrading the resilience standards yet in the wake of Arwen and of course, the review is ongoing, but there is quite a hefty sum of money going into storm resilience in your spending plan. So I think what consumers would like to hear is - What improvements can you make with the existing resilient standards with that investment that you're putting in that will achieve a better outcome, if something like that happens again?

Peter Emery – ENWL

OK, well, I'll kick off and then I'll hand over to Steve. I think one thing it's important to say is we are halfway - just over halfway through a programme to fully complete the ETR132 standard which basically improves the resilience on our high voltage network and that is working really well, it's a good standard, it's clear and in fact, for Storm Arwen, for us, it protected over 100,000 customers. We have 93,000 come off, but without the ETR132 work we've been doing that would have been nearly 200,000, so that's not good news that is often bandied around on the media, but that is the reality. It's working well, but we need to - but we need to do more. The money that's in our plan is to continue that good work, but we've also come up with some other ideas, and that actually we're going to be deploying this year and some of that will go into ED2, so I'll pass you over to Steve to give you more detail.

Steve Cox – ENWL

Yeah, just very briefly, I think in addition to the joint BEIS and Arwen - BEIS and Ofgem investigation into Arwen - there are a number of things we looked at internally. There are three key - three key things for us; the need to invest or reinvest shareholder funds to improve information for customers to Estimated Time Restoration - ETRs. So we're investing just over a million in enhancing our systems in that area this year. In terms of linking damage reports from customers to the network to more efficiently prioritise events and our LineSIGHT investments are quite significant within this period and last but not least, when we look at low voltage faults in storms, something like half of them are transient.

So, all that needs to be done to get customers back on is to restore a fuse, so we're investing nearly £5m in LV automatic reclosers.

Again, that's shareholder funded investment to further improve the resilience, so they're real material examples of what we're doing now, on top of - and that's funded by shareholders on top of what's in the plan that Peter outlined before.

Akshay Kaul – Ofgem

So Steve, you - you're talking about what you're going to do, but I think what the question is, what improvements in reliability can you commit to, for instance, for the customers in Cumbria who suffered so badly in Arwen with that investment that you're putting in? What can they expect in terms of quicker reconnection times if something like that happens again?

Steve Cox – ENWL

So, in terms of the - managing the restoration time, the most important factor - the best customer service is to prevent them going off, so that is the investment Peter was referring for worst served customers.

We've fed into the Arwen review the need to expand the scope of ETR to assist with rural communities, not just high-density areas, which is what the current standard target is, so they will make real material differences and further reduce the number of customers that went off.

In ED1, we continue to invest in network automations that we've invested over £40 million, that directly restored all 20,000 customers in under 3 minutes in Cumbria who were not shut off for an extended period.

The headline number that's in the media - it was the number that, after all that has taken effect.

So the more we do to prevent supply interruptions and to automate restoration - they are the best things to do.

After you suffer from a 40-ton tree dropping on the line and there's no alternative supply, it's all about customer care.

It's all about efficient targeting, so that's where our investments in LineSIGHT, in ETR and in damage management, to centralise all that information within our control system to give us the best possible

operational response and we work with other DNO colleagues to, you know, further strengthen NEWSAC so we bring old national resources to bear on any DNO that's damaged.

That is the way we will deliver for customers and improve their resilience.

That – as Pete says - ten years ago, that storm would have taken over a quarter of a million customers off, and it didn't, it took just under 80,000 off.

Peter Emery – ENWL

The LV auto-reclosers, Akshay, shouldn't be underestimated. We think that broadly between 30 and 50% of the customers that were off in our tail may well have been able to be restored through automatic reclosure because of them just basically resetting the fuse and that - so it doesn't solve the problem, but it just reduces the numbers and so that's why we've committed to spend £5m now, to try to see how well that works and depending on how well that works and we'll talk to you about this over the coming weeks because we're starting to do it now, we'll then decide how much more we can deploy in some of these remote areas because it's a - it's an innovation, and it's new, and it's a - it's a good way to, not solve the problem, but to reduce the size of the problem.

Martin Cave - Ofgem

OK, I think it's time for me to pass back to Steve to orchestrate the questions on the chat from some of our stakeholders.

Steve McMahon – Ofgem

Thanks, Martin, I think we'll go to Hywel Lloyd first followed by Andy Manning. So hopefully we can get the cameras enabled.

Hywel Lloyd – Facilitating the Future

Thanks everybody - obviously, you've got pretty good engagement with local authorities in your area and part of the work for UK100 that, sort, of fleshed that out helped set up benchmark for other DNOs as business as usual.

We can all see that planning for energy or local area energy planning is going to become a thing and we're wondering whether there's a sort of opportunity emerging in ED2 that would allow that level of planning to meet with your understanding of how your network is working at a substation level to then prioritise support measures for vulnerable customers.

And I think part of that is that, sort of, concern that people have, you know, new loads come on the system, if they're not mitigated by battery storage and other home based or building based technology, then any headroom you might have had just goes to the first person who buys a Tesla, which then may disadvantage those vulnerable customers. So have you done any work to think about how you might advantage the vulnerable customer in that sort of situation, substation by substation? Or could you?

Peter Emery – ENWL

Well, I think to be honest we're well placed to go down that path with a new digital network management system and also with the establishment of the DSO Directorate which happened last year and we work very closely with all our local authorities, both at county level and at local level in Greater Manchester where we have - we have dedicated resource to support the local councils in developing their local area energy plans, so this area that you highlight sounds like something we could -we could definitely work on – Steve?

Steve Cox – ENWL

Yep, thanks, just a couple of examples where we're – where we're acting in that area - and in a recent example, in ED1, we looked at - substation levels at Accident and Emergency units, which are effectively hospitals from clusters of – vulnerable customers.

We invested just over £8m in making sure that all 52 A&E units in our area have fully automated supply restoration.

And that's also being rolled out to clusters of substations where you have high concentrations of nursing homes, for example, where again, you get concentrations of customers. So, what that points to is the value of data and the value of bringing together the vulnerability data that Steph talked about before, mapping that in against the network assets, understanding the failure rates and then understanding what we can do with either behind the meter solutions or flexibility solutions or network automation solutions to improve service. Smarter is another fantastic example that drives their network automation to the low voltage level and therefore feeders that feed vulnerable customers can be switched on to alternative supplies in real time if the high voltage supply in the area is lost so they - they are very much themes that underpin our thinking of both resilience, mitigating vulnerability and also efficiently developing the network for capacity.

Steve McMahon – Ofgem

OK, I think we'll go to Andy Manning from Citizens Advice next. Hopefully we've got Andy lined up there.

Andy Manning – Citizens Advice

Thanks Steve. Good morning, all - thanks for everything so far. So, I wanted to return to fuel poverty -so, you mentioned scaling up fuel poverty support, but should bill payers be funding all of this? Did you consider shareholder funding as some of the other network companies have, and does it risk duplicating other local provision?

Peter Emery – ENWL

I think I'll actually pass you on to Steph to go through some of the - some of the detail, but I think our view is, it depends on your terminology.

As I've mentioned at the start, the shareholders, whilst making - whilst the business has made savings, have reinvested £70m - almost 50% of the savings that we've made, have been reinvested in the network and some of which has gone on vulnerable customer support. I mean, we've boosted it by quarter of a million pounds for the last two or three years of ED1 so that is, you could argue, is shareholder funded because it was not in the budget.

What we're trying to do, I think here is - is putting a more systematic approach that is consistent across the patch and I don't think using a CSR type framework is particularly helpful when you're trying to put in a robust systematic approach. If Steph can just outline, perhaps, the framework that we - that we're trying to put in place.

Stephanie Trubshaw – ENWL

Hi, I think it's really important to understand that yes, we have built on the ED1 position for shareholders, and now all of our customers and stakeholders have been through this and fully support the socialisation of costs for us to achieve the 250,000 reach, and as we all know, we discussed multiple times today, that 250,000 is going to increase and when we go to shareholder funds, the next idea is there's going to be new pockets of information and changes that happen that we will want to call on from that CSR, and I don't, and neither our shareholders - stakeholders, and customers, want to commit that flexibility away prior ED2

starting because if we had done that in ED1, when we need to put extra funds in for COVID, we'd have already committed that additional support from our shareholders, so because this will be scaling up to such a place to achieve what we know that already – we all know that the data received on fuel poverty is already out of date before you can actually see it. Then what we're going to face in 2025, what we're going to be looking for support - we need to have the minimum position scale of them covered within the costs and then go to our shareholders when we find new challenges that are going to hit our customers so we can continue to be there for them.

And I think when we look through that position, the fact that our customers and stakeholders totally support that they want to socialise – it's lower cost for all of them for the future benefit, it's what the community of the Northwest wants and we need to continue to be flexible all the way through ED2 and not stuck to the fact that what we present now - is that only things we can deliver.

Peter Emery – ENWL

Just add one final thing, Andy, on your question about is it going to duplicate local provision?

We checked very carefully with our partnership network who were going to deliver this rollout for us, whether there were any alternative funding sources and we are only committing to fund those who said if there's no funding from Electricity Northwest for this, this service will die and there is no alternative funding provision, so we're not duplicating anything here.

Any Manning – Citizens Advice

Thanks, thanks all. Steph. Just to follow to make sure I'm understanding, but I think what you're saying is, there will be additional activity that you're not able to identify yet, and so is that – so they're not a specific commitment. Will that be shareholder funded 100% or will that effectively be spending, which will be split naturally because of the sharing?

Stephanie Trubshaw – ENWL

It'll be dependent on the scenario, there could be split, there could be funded, because that will come through CSR.

It all depends on what the range of activity is required at that point in time, but it will be reviewed and considered at each stage and I think it - it's really important to recognise that that is the learning that we got from ED1, and our shareholders did step into space when we needed it.

Peter Emery – ENWL

Yeah, I mean our experience, Andy, is that if we outperform we've then got far more discretion to do - to do more, because that's why driving efficiency is so important to us, it certainly helped us deliver in ED1 and that's how we run this business.

Steve McMahon – Ofgem

OK, Andy – I'm conscious that you had a question from earlier just in terms of returns and deferred investment. Do you want to pick that up just now before I come to Judith Ward?

Andy Manning – Citizens Advice

Yeah, I can do Steve. Yeah – so, from your business plan, I think there's a suggestion that - so this is looking at finance and Ofgem's working assumptions about the rate of return, that there's a risk that that will lead to you deferring investment. So, while I'm struggling to put together that you're a licenced network operator with obligations to invest - so what does that mean in practise at the - is there that much

discretion, that you have these choices about deferring investments or not, when you have these obligations as a licenced network operator?

Peter Emery – ENWL

I think we are - we are confident that Ofgem will come up with a return that is attractive to make sure that that circumstance doesn't occur.

What we are concerned about is that certainly one of the - the Ofgem scenario that we see, really is the bare minimum to maintain investment grade, well below triple B plus, which actually suggests that there is reducing resilience at a time where we have massive change and we've got problems in the supply market, we have a lot of uncertainty and a lot of growth and our view is that the sector needs to be resilient, but I'm confident that Ofgem will come to the right conclusion.

Andy Manning – Citizens Advice

Thanks Peter, just to explore that direct point about how much discretion do you have about deferring investment in reality? Aren't you obliged to, as price controls should work, that you get the money and you have to do the stuff for it, as we all know, which I think we're all happy with. So, where is that room for deferring investment?

Peter Emery – ENWL

Well, I think one of the biggest issues that is yet to be resolved, I think, within the base budget that we proposed - and we're confident that that won't be a problem - the issue will be uncertainty mechanisms and how timely the cash is made available, so in a scenario where cash comes two years after it's needed, that's clearly a problem. But we're working with Ofgem to produce an agile framework for uncertainty mechanisms, and I - so far it looks to us that we're going to come to a solution that will meet customer needs, be responsive and allow us to invest without any undue delay.

But again, we need to work with Ofgem over the next eight or nine months to get that in place.

Steve McMahon – Ofgem

OK, thanks Andy, and come to Judith Ward just on the environment and prioritisation and allocation of spend. So hopefully we can get Judith on camera.

Judith Ward – Sustainability First

Good morning, everybody. Sustainability First is a charity, we're a think tank, we've touched on some important issues this morning, but the Sustainability First response to the Call for Evidence looked across all of the environmental action plans of the DNOs and we had a particular focus on decarbonization. The ENW EAP material was helpful - it was clear, it was accessible.

So, your spend - total spend on your environmental action plan is £75 million.

You've split this to spend most on pollution compliance, so 37% on oil cable leaks, 28% on PCB elimination, but in fact, you know, when we look at SF6 management, which is a very long-term problem, you're only spending 13%, similarly on losses management. On biodiversity 2.5%, whereas on decarbonizing your own buildings and depots, which is basically energy efficiency and renewable energy purchase - 6.6%, so in similar vein to Jeff Halliwell earlier, you know, how have you really informed these specific percentage shares and can I - just to echo Jeff Halliwell - how can we be sure there's no element of complacency on SF6 and on losses management? Nobody actually owns the losses problem.

It's a major efficiency issue, not just a decarbonization issue - 7% of power lost in transfer across the networks, so could DNOs be given a clearer responsibility to own the part of the losses problem that they can shape?

Thank you.

Peter Emery – ENWL

OK, well I'll - I'll make some opening remarks and then I'll then - I'll pass you over to Steve, because this is the environmental action plan, it's in his area. I mean one of the issues that we have with losses is - is getting value for money and getting the best return for customers, particularly as the - as the network continues to decarbonize and to put it bluntly, our cost benefit analysis suggests we're better off spending money in other areas to deliver more benefit, but Steve will take you through a little bit of that.

The rest of the plan is geared to our stakeholder - our stakeholder feedback.

Most of our stakeholders are targeting decarbonization by 2038, so we have a steady glide path to Net Zero by 2038, which means we're not - we're not throwing money at this in ED2, we're taking a steady, progressive approach, taking advantage of new technology as it - as it comes.

We've also had very clear stakeholder feedback from experts in our area that we are not engaging wholeheartedly in carbon offsets. We're trying to reduce carbon from first principles and not just going out and offsetting our carbon emissions. So I think they're important principles to establish – I'll pass you over to Steve on some of the details of the plan.

Steve Cox - ENWL

OK, thanks. Just to your first point of how we come up with the numbers in the split.

We followed the approach that we've done in a lot of the areas of the business plan in that we've looked at the cost benefit analysis, which is laid out in a lot of our EJPs, we've gone through a social return on investment analysis for each of initiatives, we calculated the direct benefits and then we fed that to customers and stakeholders through a triangulation approach to ensure that they fully understand that and combine that with willingness to pay for each of these, which is of course -customers are paying the bill for this - and to work out what are the relative quantum and mix within the programme.

So, the numbers that you see are the outcome of that - of that mix.

We've also looked at, for example, in things like biodiversity, are we best placed to actually deliver this or can we do this through others like City of Trees and we've recently released a number of sites for extensive environment enrichment through third party funding. They're just using – our operational land.

So that hopefully gives you the flavour of how we come up with the quantum and the mix. Just on two specific points on SF6 we're most definitely not complacent. We changed our policy in ED1, at increased cost to significantly reduce the amount of SF6 being deployed in new switchgear at high-voltage so we reintroduce mineral oil switchgear onto our network. We've used that extensively for the past seven years.

We recycle all of our oil with our own recycling facility, we're the only DNO to have complete control of that oil within its switchgear population and that has directly displaced SF6 that would have otherwise been put in switchgear.

We need to look at, you know, going back to Bev's theme, the importance of reliability and again, Jeff's points earlier in the discussion today about the importance of reliability. Not all of the technologies are there for SF6 replacements at some of the high voltages.

We're a key member of the ENA Switch Gear group and we are pushing to get non SF6 gases in modern switchgear and we're about to do our first 132 KV board using a non-SF6 alternative, as an example of, again, reinvestment towards that environmental commitment.

I think on losses you make a good point - what is the balance?

Losses for us, when you run it through that - that sort of six step justification model - where we can invest wisely, where it's supported by customers, where it produces a positive benefit - we will invest in losses reduction.

I think to some of the points, I think Maddie made before, around network data visibility will give us all better understanding of losses and that will allow others to come up with some solutions to losses so it may be that behind the energy – behind the meter storage solutions are more effective means of managing peak - peak network losses, so I think that that is the way we're approaching it, not carpet bombing the network with more copper, which would be hugely expensive, although it would reduce losses, it may not necessarily be in the best interest of customers in the long term.

Steve McMahon – Ofgem

Steve, we're going to have to wrap up, I'm conscious of time - are there any final thoughts before I hand back to Martin?

OK, well, Judith if there's other bits that you want to follow up with then please do, with Steve, probably. Martin, I'll hand back to you because I'm conscious of the time.

Martin Cave – Ofgem

OK, well that brings us to the end of this - of this Open Hearing and just to repeat some points made by Steve at the beginning - if your question hasn't been answered then we'll work with Electricity North West to consider the best ways of responding to you.

As you've heard, this hearing has been recorded so that after all the Open Hearings are completed, we'll publish transcripts on our website and we will consider today's discussion very carefully ahead of our draft determination in the summer, I think we've had a good debate and I'm grateful to Peter and his colleagues for contributing as they have. So, it just remains for me to thank you all for attending and contributing to the process.

So goodbye.

Unanswered questions

1. **Hywel Lloyd, UK100: Does ENW flexibility approach include behind the meter interventions, especially for vulnerable customers, e.g. battery storage in homes?**

Yes we have specifically allowed behind the meter solutions to participate both individually or through an third party intermediary.

2. **Hywel Lloyd, UK100: In becoming the trusted advisor on technology (including LCTs) how will ENW manage/prevent 'ill advised' consumer choices, e.g. those which adversely affect local network capacity?**

We don't consider there are many ill-advised customer choices. If the UK is to achieve its decarbonisation objectives it is vital that momentum is gained on the necessary changes and we see our role as economically facilitating these changes. We do of course proactive engage and support customers choices and where appropriate highlight cost tipping points. This is why we have included customer engagement and support as specific elements within our DSO business plan.

3. **Hywel Lloyd, UK100: Re: airport, while gross demand might double, net system demand need not with appropriate behind the 'site' meter technologies. How might demand projections link to LAEPs and new technology approaches that can reduce 'net' demand? Will all of those stations exist in ten years' time?**

We agree behind the meter or within site solutions are an important part of the solution set to meet forecast demand. We work with all major customers such as the Airport to ensure we have a joint view of the options available, we also extend this liaison to IDNOs. In many circumstances small changes can make a considerable difference to the network implications but in others, particularly where extensive redevelopment occurs, network capacity increases are appropriate. For example whilst we can work to mitigate EV charging with behind the meter solutions – TOU, storage etc, where passenger EVs concentrate

in large numbers we forecast to need some network based solutions to allow customers to decarbonise their lives and businesses.