Cynulliad Cenedlaethol Cymru
The National Assembly for Wales

Y Pwyllgor Amgylchedd a Chynaliadwyedd
The Environment and Sustainability Committee

Dydd Mercher, 19 Tachwedd 2014
Wednesday, 19 November 2014

Cynnwys
Contents

Cofnodir y trafodion hyn yn yr iaith y llefarwyd hwy ynddi yn y pwyllgor. Yn ogystal, cynhwysir trawsgrifiad o'r cyfieithu ar y pryd.

These proceedings are reported in the language in which they were spoken in the committee. In addition, a transcription of the simultaneous interpretation is included.

Aelodau'r pwyllgor yn bresennol
Committee members in attendance

Mick Antoniw	Llafur Labour
Jeff Cuthbert	Llafur Labour
Russell George	Ceidwadwyr Cymreig Welsh Conservatives
Llyr Gruffydd	Plaid Cymru The Party of Wales
Alun Ffred Jones	Plaid Cymru (Cadeirydd y Pwyllgor) The Party of Wales (Committee Chair)
Julie Morgan	Llafur Labour
William Powell	Democratiaid Rhyddfrydol Cymru Welsh Liberal Democrats
Jenny Rathbone	Llafur Labour
Antoinette Sandbach	Ceidwadwyr Cymreig Welsh Conservatives
Joyce Watson	Llafur Labour

Eraill yn bresennol
Others in attendance

Alan Simpson	Cynghorydd annibynnol ar bolisi ynni a hinsawdd Independent advisor on energy and climate policy

Swyddogion Cynulliad Cenedlaethol Cymru yn bresennol
National Assembly for Wales officials in attendance

Alun Davidson	Clerc Clerk
Gwyn Griffiths	Uwch-gynghorydd Cyfreithiol Senior Legal Adviser
Peter Hill	Dirprwy Glerc Deputy Clerk

Dechreuodd y cyfarfod am 09:01.
The meeting began at 09:01.

Cyflwyniad, Ymddiheuriadau a Dirprwyon
Introduction, Apologies and Substitutions

[1] **Alun Ffred Jones:** Croeso i'r pwyllgor. Os bydd larwm tân, dilynwch y tywyswyr. Gofynnaf i bawb ddiffodd eu ffonau symudol rhag iddynt amharu ar yr offer darlledu. Mae Cynulliad Cenedlaethol Cymru yn gweithredu'n ddwyieithog ac mae clustffonau ar gael i glywed y cyfieithiad ar y pryd. Peidiwch â chyffwrdd â'r botymau. Arhoswch i'r golau coch ddod ymlaen cyn

Alun Ffred Jones: Welcome to the committee. If the fire alarm sounds, please follow the ushers. I ask everyone to switch off their mobile phones so that they do not affect the broadcasting The National Assembly for Wales operates bilingually and there are headsets available to hear the interpretation. Do not touch the buttons. Wait until the red light comes on before you start

dechrau siarad. A oes unrhyw un sydd am ddatgan buddiant? Na. Nid oes gennyf ymddiheuriadau. Rwy'n cymryd bod Antoinette a Russell ar eu ffordd. Maent wedi cyrraedd. Dewch i mewn, gyfeillion.

speaking. Does anybody want to declare an interest? No. I do not have any apologies. I take it that Antoinette and Russell are on their way. They have arrived. Come in, colleagues.

09:02

Energiewende: Profiad yr Almaen a'i Berthnasedd i Gymru
Energiewende: The German Experience and its Relevance to Wales

[2] **Alun Ffred Jones:** Yr ail eitem yw cyflwyniad gan Mr Alan Simpson. Croesawaf Mr Simpson yma'r bore yma. Diolch yn fawr iawn am ddod. Mae'r pwyllgor, yn y gorffennol, wedi gwneud gwaith ar bolisi ynni a chynllunio ac yng nghyd-destun ein gwaith ar ynni cymunedol, mae'r sesiwn hon yn gyfle i glywed gan arbenigwr yn y maes am ddatblygiadau perthnasol yn yr Almaen. Bydd yn gyfle inni ddod yn gyfarwydd â'r maes cyn dod yn ôl ato, efallai, yn y gwanwyn.

Alun Ffred Jones: Our second item is a presentation by Mr Alan Simpson. I welcome Mr Simpson here this morning. Thank you very much for coming. The committee has, in the past, done work on energy and planning policy and in the context of our work on community energy, this session is an opportunity to hear from an expert in the field about relevant developments in Germany. It will be an opportunity for us to become familiar with the field before coming back to it, perhaps, in the spring.

[3] A very warm welcome, Alan. We are very pleased that you were able to come here. The floor is yours and then we will have a discussion after you have enlightened us. This is on Energiewende.

[4] **Mr Simpson:** Yes, Energiewende. If I can sort the technology out, we are rolling. Thank you very much for the invitation. This is a really exciting time for me and I think that it is a fantastic opportunity that holds itself up for Wales. The key challenge that we face in this time is whether we can think differently about energy—thinking in a way that really moves all of the goalposts, because unless we can do that, I think that we are going to be really stuck and left behind, both economically and in terms of sustainability; we are going to find things harder and harder to address.

[5] So, I want to begin with the change of thinking that is involved and then how we move that thinking into a different reality. The first point—I know that many of you are just too young to remember this—is on the way technology is changing the whole energy game; it is the pivotal starting point. When I was a kid, the red telephone box was the lifeline. It was how I phoned my mum, how I could get a taxi home and how I could phone my mates—it was the way of connecting with others. Now, mobile phones is where most of us are. My oldest daughter has a red telephone box in her garden. It is ornamental, but if we came around now and said, 'We've got this great economic plan for Wales, which is that we're going to put red phone boxes back in every town, street and village', there would be looks of complete disbelief among the public, and that would be right, because our ability to communicate no longer has the landline as the lifeline. It is exactly the same in relation to power stations.

[6] The time when power was a one-way street between a power station and a plug is gone. It is going to be two-way traffic, and, actually, it may well not be about power stations at all. There is a man I work with in Berlin who is an adviser to the Government who did a briefing about six months ago to one of the German big four power companies, and he explained to the board members in fairly specific ways how at least two out of the four big energy companies in Germany will probably be bankrupt within the decade. Their economic

model does not stack up, and the company models going forward are almost certainly going to be energy services companies. The board members asked him, 'Is there a way of avoiding going bankrupt?' He said, 'Yes. All you have to do is sell your power stations'. There was a pause and they said, 'We only do power stations', and he said, 'No, you've got engineers; that is the prime asset you need to look to going forward'. It is about where and how you retain and develop the engineering skills that will be the core of a much more diffuse energy system within a decade.

[7] The one other point I would make is in relation to that power station image. I was going to do a slide depicting the Roath power station that had served Cardiff, but I just did not get enough of the additional information that I wanted to put it in. However, the thing that I was going to say is that we need to recognise that it is also a back-to-the-future moment. Up to 1947, your local power stations were, by and large, municipally owned and, at that time, about 50% of local authority income came from the sale of power. I think that that model is much more relevant to the stage ahead than we think. We forget that at our peril. Other parts of Europe have already either grasped that or are reconnecting with it in a way that is seen as an economic strength and not as an economic threat.

[8] 'Power' politics going forward is not just going to be about technology. It is as much about democracy and ethics as it is about energy. This photograph on the screen now was taken on the night that Hamburg had its citizens' vote, and they had just successfully voted to take their energy grid back into social ownership. The reason for that was that citizens in Hamburg had started to initially make requests of their energy supplier, Vattenfall, for the right to buy clean energy, and Vattenfall said, 'No, you'll buy the energy that we supply'. They said, 'Well, if we don't like it and you can't supply clean energy, we're going to take the system back'. They were laughed at, but they ended up getting the right to hold a referendum, they held it, and the franchise is being returned to social ownership. The municipality in Hamburg is currently working on the technical details of how it is going to do that.

[9] However, it was really interesting that the citizens' debate there was about the right to have access to clean, sustainable energy, and the old models that could not deliver it and were not interested were not going to get a look in. So, it has thrown the system into some degree of very constructive chaos there, because the ethics of what underpins what happens going forward is about a set of very strong civic requirements that tomorrow's energy system has to be willing to take clean energy before dirty. It has to be willing to think about consuming less energy rather than more. It has to be more about systems—the way things interconnect—than individual technologies, and it embraces a new politics of interdependency. I would just say at this point that I think that this is one of the great strengths that you have in Wales that is maybe not, sadly, a characteristic across the whole of the UK: the sense of community, the sense of interdependencies, the sense of commonalities have not been lost here in the way that they have been in other parts of the UK. I think that the cul-de-sac of individualism that has been a millstone around the neck of UK politics for more than 20 years leaves other parts of the UK much more poorly placed to do what I think you can still draw on as a massive political and social asset.

[10] So, this is what it has meant in Germany: in the space of about eight years, they have installed what I think is now getting on for about 75 GW of renewable energy. That is more than peak UK energy requirements. That momentum is now inexorable. However, the key point that I wanted to draw your attention to is that the two o'clock position in the pie chart that you can see on the screen now shows that the big four power companies own less than 5% now of the new energy. The rest has been contributed by farmers, individuals, households, communities, and a whole series of municipal partnerships. The big energy companies just are not credible players in the process. In the space of eight or nine years, Germany has gone from having four main power suppliers to having 2 million contributors to

the energy system. So, it is an energy system that has to learn how to receive as well as how to supply, and that is a really difficult ask for major energy companies.

[11] In the area where I live, we have an energy co-op that we set up called MOZES. It is very exciting; Prince Charles came and did his rounds around the terraces and everyone loved it. The energy company was saying to us all, 'This is all very well but don't go too fast on this because you can overload the system and blow all the fuses'. I asked, 'What do you mean?' They said, 'No, no, it's too difficult'. I said, 'Look, come on, we're talking about terraces not terawatts and 50 little old ladies with solar roofs are not going to plunge the nation into darkness'. He laughed and he said, 'Yes, actually it's what in the trade we call an ICBA problem'. I am not an engineer, so I asked him what that was, and he said, 'It's "I can't be arsed"'. Energy companies have no interest in putting switching systems in substations where they can receive energy that they have to pay you for. What they like is supplying energy that you have to pay for, and the more you have to pay the better as far as they are concerned. The model does not receive. So, it is not a technical obstacle; it is a sociological one, and at the moment the UK, I think, is hovering on the cusp of whether it throws shed loads of money at the past or whether it takes a leap of faith into this sort of future.

[12] Some of the critics have asked, 'How do you sell less energy?' One of the things that has staggered some of the UK politicians who we took over was the recognition that one of the biggest driving elements in the general programme is their KfW bank. We had a meeting with the board of the bank when Naomi and I took a group across to Germany. The bank first of all said to us, 'We don't understand. Why do you work through energy companies in the UK?' We said, 'Well, because that's where the energy is supplied from and they've always been our major partners'. It said, 'But they just get in the way. We have taken the whole initiative away from energy companies so that the bank now is one of the key drivers', and this came as a real shock to the mental processing system, because, we were asking, 'Well, how does that work?'

09:15

[13] The KfW bank has developed its own protocols it trains the high street banks to deliver—it has a four or five page pro forma application form such that, if you have the relevant permissions, the expectation is that the bank de-risks the process, and that anyone going in should be able to get approval signed in the one meeting that they have with the bank, rather than in a protracted process that can take from six months to three years, in which people lose the will to live. What KfW is doing is delivering long-period loans—about 15-year loan periods—at 1% interest. In the case of refurbishments programme, this is conditional upon the ability to get close to what the Germans refer to as their near-zero carbon homes standard for refurbishment. So, what that did in 2012 was to deliver nearly 360,000 whole-house refurbishments and nearly 370,000 jobs. It was the bank that was pointing out to us that the great thing about this is that that work does not go offshore—your loft is going to stay onshore, in your community, in your street—that is the place where the work has to be done, and that is where the skills are going to have to be found in order to deliver the energy-saving solution. So, energy saving is a centrepiece in that jigsaw—it is about the economics of using less, but creating more, in this case, more work.

[14] What has it done? Well, the graph on the screen shows where Germany has been over the last 12 years. Its GDP has increased by 28%; its greenhouse gases are down by 22%. I checked yesterday, and they are saying that they are still committed, and think that they are on target to deliver 40% reductions in their greenhouse gas emissions by 2020. That is not at the expense of economic growth—I think that is something that the UK just does not get. Far too often, the debate is that, 'This would be lovely to do, but, in the current climate, it is just not affordable'. What the Germans say is, 'In the current climate, this is the only coherent economic path to be going down, and it is the virtuous one'. So, they are doing this—

delivering 400 MW of demand reduction measures per month—which is the equivalent of closing five power stations a year. So, the whole locus of the debate in Germany is in a different space. We are arguing about the construction of different types of power stations, and they are not—they are talking about different power systems, and the ability, as I said, to deliver more but consume less. It is not just about electricity. The slide on the screen now shows a snapshot of a place called Ackermannboge, in Munich. I did a short film for the BBC, at one point, on the hill that overlooks this estate, which is pretty much where the photograph was taken from. The intriguing thing for me was not the array of solar thermal roofs that they have put on existing estates, but the hill itself, because the hill itself is a reservoir. They have put a huge water store there, and then they have landscaped it—it has swings and benches and places where families have picnics—but that is the reservoir that stores the heat that is then reused within the estate, and the effect of it has been to reduce people's heating bills by 50%, and it connects into the district heating system and a series of heat pumps. So, you have a different approach to both the supply and the balancing of both heat and power needs. What is difficult to be able to grab hold of and transmit is the sense in pretty much every community in every part of Germany that I have been around and talked to about their different approaches to the shift on their part to the Energiewende process. You could almost bottle the sense of engagement. People own the solutions and do not just feel that they are burdened by the problem and that it is someone else's duty. The level of civic engagement in solution finding is just awesome. I wish I could have bottled it and brought it back, and put it in everyone's water. That is where Germany is already.

[15] Coming back to Hamburg, they had a really interesting debate at the municipal level. They were told that they needed, for electricity security, to have an additional 2 GW, which is effectively two power stations. They had various working parties looking at the different power station options and locations, construction costs and everything, and then they had a third looking at any other ideas. It was the third group, the any other ideas group, that won the day because it has a partnership now with BMW and VW. Instead of building any new power stations, they are installing about 100,000 combined heat and power systems in people's homes, nurseries, schools, factories and offices. You just work them in the way you would do a system here. You set your own heating controls and that is fine, but there is also a central control unit to balance energy requirements for the city as a whole. When the city has a surge of energy and it is suddenly generating less than the demand on the system, then an instruction goes out and everyone's heating unit just steps up a notch, and that generates the electricity that will balance the city's needs. As citizens, the first time you would know about it was when your next heating bill came in and you would find a credit payment for your contribution to the electricity generation that kept the city's lights on. So, people are part of that process, and it pays them.

[16] In one of the communities I went to, I was asking them about this. They all talk about climate change and the need to tread more lightly on the planet, and about citizens need to take responsibility, and I was the one who had to come back and asked about costs. Does it make a difference that you get paid? At that point, they all laughed. One said to me, 'The truth is, we Germans, we are probably no better than you Brits at being able to say what a tonne of carbon looks like, but we can tell you what a cheque looks like when it comes through the letterbox, and we think you would recognise that too'. It is that sense of buy-in and the notion of a mutuality of benefits as well as mutuality of responsibilities. That is something that again ties in very strongly, and you could trace this back, to what are the jobs and skills programmes that underpin that transformation. That is in a separate and really exciting space in which the Germans understand that it is those skills going forward that will deliver the jobs and their own economic security, as well as energy security.

[17] Karlsruhe just happens to be the city that is twinned with Nottingham, where I live. It is now one of 190 German towns and cities that are taking their energy grids back into social ownership. Just to see the difference in the picture there, there are now over 800 electricity

distributors in any locality. You probably have a choice of about 70 suppliers, which is very different from where we are now. There are over 700 energy co-ops. Last year, one in six of the German companies were installing renewable energy in their own offices or factories.

[18] Pivotally, where localities can sell the energy they generate back to their own communities at lower prices, that has been an absolute game-changer. Within the UK, the big six are desperate to tell people that you cannot possibly do that, because it breaks the cartel if people no longer have a stranglehold on prices. If people do not have to go into new high-voltage distribution networks that reinforce a model of red telephone boxes, if it is not going to be like that, the money can go elsewhere and people can be charged less for living more lightly. It is a very powerful incentive, and I think that goes way beyond the notion of those who want to begin with the planet and whether we have a future, to those who are legitimately much more concerned about whether they can pay their family bills at the end of the week. So, the two are not at odds. They have found a way of putting those two concerns into the same space.

[19] This is partly where, I think, you come in in helping the worst of society to move into that different space. There has to be leadership, and part of it is about understanding that all the fear issues that are thrown up just are not insuperable barriers. In the UK, much of the debate staggers to get past the notion that, if you go into this space, all the lights are going to go out. It is a sort of bogeyman response that prevents us from having the more serious discussions about entering a much more creative era.

[20] So, the balancing in the future is not going to be based on the single wire that goes from the power station on the left of the screen to people's homes on the right. We are going to have to learn to live more nimbly—and that is what technology will allow us to do. The technologies that underpin tomorrow's systems thinking are all here now, and they are quicker, lighter and much more interactive than any other thinking that underpins the past. They will require us to develop new approaches to systems. Again, in Germany, they have a much stronger sense of interconnectors, both between localities and regions and between Germany and other countries. The UK is the most poorly interconnected part of Europe. Actually, it would be cheaper, and quicker, to build new interconnectors than to build new power stations. I have been trying to talk with some people about whether we could actually have a community-funded and owned interconnector, because wholesale power prices in Europe are 50% lower than those in the UK. So, this is part of the reflection about saying that if you are interconnected, you are not subject to the same non-negotiable price demands that are put out by one or other of the big six.

[21] We are going to have to learn—

[22] **Alun Ffred Jones:** Can I interrupt you there? You said that prices were 50% lower on the continent or in Germany. How is that? Presumably, they are just as dependent on gas?

[23] **Mr Simpson:** They are. What I was being specific about there was electricity wholesale prices. However, you can go onto a website called the EEX, the European Energy Exchange. What is quite clear is that they have considerable surpluses. The use of renewables has really helped to drive down their wholesale power prices. There is another site—and I do not think that I have put it in my evidence—which shows, on a daily basis, what Germany has been able to do, which is to harness a considerable amount of primarily solar power but also, to some extent, wind power from the north, which really impacts on the peak demand periods for electricity use.

09:30

[24] So, if you take the demand curve, what this has done is shaved off a considerable

hump from the peak demand. If you can do that and turn it into a more undulating demand curve, then everyone in the industry knows that prices are determined by peak power prices, and so that is where the real reductions in cost can be made. Germany exports considerable amounts of its energy surpluses into the European grid. We could buy that, as I say, at 50% below UK wholesale electricity prices. We do not, because we are not particularly well connected.

[25] Also—and this is intriguing—one of the other points that came out for me was that if you look at profits within the energy sector, the highest rate of return on equity at the moment is enjoyed by National Grid: a 24% return on equity. I do not know about anyone else, but you can be lobbied by different energy companies saying, 'Switch to us,' but no-one has turned up on my doorstep saying, 'Look, I've got a whole load of cabling outside, and I can connect you to my Simpson grid system. Do you want to be part of it?' This is a national, natural monopoly of the wiring, and why you have a 24% return on equity on that just baffles me. However, it explains why there is a reluctance from National Grid to encourage a move towards local grid systems. If its income stream were based on motorway toll road systems, people not using them would just mean a loss of revenue. It may make for a very different set of economic prospects to localities, but it would not work for the existing model. So, that is where, for me, everything that is exciting about balancing the challenges is seen as a threat to the existing model.

[26] The last point that I will make on this is that, when we were in Berlin, we went to the headquarters of 50Hertz, the grid-balancing distributor. The headquarters had a room that was perhaps three times the size of this room, full of huge monitors like these screens, and I asked the person who was the chief executive there, 'Is this a big threat to you, because there is much greater volatility in renewables than in a conventional power plant? Does that scare the pants off you?' He said. 'No. What do you see in this room?' I told him that I saw the screens and that it was full of people at their desks, and he said, 'Do you know, the people in that room are some of Germany's most skilled engineers, and they're bored. They sit there and nothing happens for most of the day. You get very short periods where all hell breaks loose, and you have to then call in extra supplies into the system, and that is when they feel that they earn their money, but now that we have a different approach to balancing, we need real-time information, that is for sure, but does it scare them? No, because they are engineers. We have people queuing up to be working on how we are going to be balancing in the new system. People love it because they are working and their minds are working on solutions to problems that they were trained to address. So, far from it being a threat, this has given a real injection of creative life for us in here. All that we require is real-time information.' That is where, in a sense, the national leads have to come in, working out the 'how' of setting up the mechanisms that will deliver smart grids and the use of interconnection, the way and different places of storage. Intriguingly, that, I think, is where the principal resources of EU funding are going to be available, to look at how those different mechanisms can be put into place and how they can be trialled. Some will work, and some will not, but which are the ones that we then run with and carry forward?

[27] Green grids are quite a contentious issue, in terms of storage. The slide shows just one example, which has opened within the last month, of a 5 MWh battery storage in Schwerin, in Germany. There are people who will argue that it is better to store electricity as heat, or as hydrogen, and there are advocates of pumped hydro. My gut feeling is that we are at a stage where we are going to have to experiment with lots, and that, I think, is the pattern of what the EU is putting up financial matching support for. We have one of these projects just approved last week, for Nottingham. Manchester has a similar one for a whole-city storage system. I think that these are where we are going to see the models of experimentation. If you were asking me, 'Are we clear what the answer is? Which is the technology that works?', the answer is, 'no'. At this stage, we do not have that answer, and I am not sure that we will ever have a single answer, because my gut feeling is that the answers

will probably be geographically appropriate to the different locations and regions around Europe. Those solutions about storage will probably have regional relevance as much as technological relevance.

[28] In southern Germany, for instance, there is a swap arrangement with Austria. So, when the solar surpluses from the Munich region are there during the day, they are swapped with Austria, which just switches off its pumped hydro and lets the dams just sort of fill up more. Then, when the sun goes down, Austria switches back on its hydro, and then its surpluses are swapped back into Bavaria. That is their balancing mechanism; they have not had to put in any new energy motorways to drive that—it is just the way in which they do those sorts of deals, so that they are storing out of what they have. There will be places that can do that; there are others that have to put them in afresh.

[29] **Jeff Cuthbert:** Sorry, I just have a minor point. The 25,600 cells—is that per battery tray?

[30] **Mr Simpson:** That is for that unit.

[31] **Jeff Cuthbert:** For the whole unit? Right.

[32] **Mr Simpson:** For the whole. Yes.

[33] **Jeff Cuthbert:** Not per tray?

[34] **Mr Simpson:** No.

[35] **Jeff Cuthbert:** Right, okay.

[36] **Mr Simpson:** The point about it is that it allows rapid release, and that is one of the key things—how do you deal with rapid response to changes in demand within the system? The intriguing thing, again, for me, is that, when I trailed these sorts of concerns around some of the political leaders in Germany, they just looked at me askance and said, 'Oh, we give that to the engineers. We are politicians—we make the political decisions. We are saying: this is where we are now, in 10 years' time, this is where we have to be—get on with it.' It is just refreshingly clear that what they were saying was, 'This is where we intend to be—you come up with solutions.'

[37] **Antoinette Sandbach:** I wanted to ask you about how they have managed to get—. In your paper, you mention the FITs legislation, and the decision to give priority to grid access to renewables. One of the big barriers here, it seems to me, are the high connection costs that energy companies impose on people in trying to install renewables. I mean, the renewables may make sense without connection to the grid at all, but it seems to me that they are putting barriers in people's way. Has that been a political decision, just to say to the German grid, 'You will connect small-scale renewables before big projects'?

[38] **Mr Simpson:** Absolutely. Absolutely. I have to say, I drafted the amendments to the Energy Act 2008 in the UK, and, in doing so, I had fully lifted the German model, so there was no presumption that the UK would only partially apply the feed-in tariff framework. However, that is what we have ended up with, and, by and large, the battles over those amendments were fiercely resisted inside DECC. There has been an ongoing battle. When it realised that there were not the parliamentary numbers to block it, the next level of responses was to throw in a whole series of administrative obstacles. So, for instance, it is still the line argued by Ofgem that there is no merit order effect, nor should there be, and that it is just left for the market to decide. However, that is not how the market currently works, because a lot of the access rights are grandfathered rights from existing power stations. As long as there is a

situation where dirty continues to be taken before clean, you are never going to have a momentum that changes to clean. So, all of the historic subsidies that went into that process get overlooked and the costs of shifting become the burdens. The German answer to that is you just make 'clean' the priority. You have a 'clean over dirty' presumption and that extends through to grid balancing costs. Who meets the costs? Well, you do not put the costs on the system that you want to bring in, you put the costs on the system that you are trying to move from; it accelerates the change.

[39] **Antoinette Sandbach:** Your pie chart showed that 35% of generating capacity is effectively in the hands now of private individuals. Is there a limit on the feed-in tariff for the scale of project? In other words, what we have seen in the UK is the big energy companies installing lots of big turbine projects. Is that subsidised? Does it have a cap that incentivises the smaller scale projects to be done before the bigger size?

[40] **Mr Simpson:** It does not have a cap; it has a matrix and it is a very smart matrix that has definite levels of feed-in tariff for different scales of generation. It also has a national framework in which the presumption is that there have to be technology and efficiency gains of 3% a year. Germany currently has a presumption that it will be installing 3 GW of renewable energy a year. It has a range of 2.5 GW to 3.5 GW. For every gigawatt over 3.5 GW, there is a 15% digression in FITs per year, and there is a further 3% for every additional gigawatt you have exceeded the 3.5 GW installation level. So, what it is saying is, if the market is producing real efficiency gains, then those have to be passed on to the public and they have to be taken away from the cost burden of subsidising the shift. So, it has a very effective way of passing on technology gain.

[41] The second thing that it has, and where I think the UK has completely got into the wrong space about the argument, is that, in relation to wind generation, a lot of its applications go through within about six weeks. Why? It is because they are overwhelmingly community-owned. So, we have found ourselves stuck in a sort of Viking invasions debate about people occupying landscape. For what? A little more than a bag of sweets. Again, the discussions in Germany are quite different. There are people who do not like wind turbines, in the same way that there are people who do not like electricity pylons. That seems to me a legitimate point of view.

09:45

[42] However, in the debates about things, when people can see that the turbines are theirs, that they get the first use of the electricity and that it cuts their electricity bills by 30% to 50%, it is a different debate, because those debates then revolve around the parts that communities can play in delivering their own energy security. One of the communities said to me, 'You know, in all of this, if al-Qaeda gets put into the equation, it is a damn sight harder to take out 20,000 roofs than one power station'. The system is more diffuse and it has greater resilience. So, it just changes the thinking about vulnerability, security and civic engagement. There is nothing magical about this as a process; you are absolutely right to say that it is the rules that you set for the way that the game is conducted that determine who gets to be a player and who gets to be just passengers. I think that that is one of the strongest things to take from Germany.

[43] 'What combination?' is one of the biggest arguments that I come across around the country. People want to know where the combination of wind, solar, hydro and geothermal comes from. The answer, to me, is either 'I do not know' or, again, that this is going to be a factor of the locations where the energy systems debates are taking place. I will just make one comment about the geothermal plants; I went to look at some in Munich and was amused, because one of the things that the Germans said is, 'Look, where we can, we do not bother doing heat networks, because people do not like having their streets dug up. In any case,

where do you need heat? You need it in your home; when you come in, if you want the gas, you put it on as gas.' So, they had a plant there that I went to look at, just outside Munich, which takes the biodegradable waste from part of Munich. They have separate collections; the waste goes to a biodigester, the biodigester produces biogas, cleans it up to biomethane and puts it back into the grid. You are not charged extra for this, but you can choose to become a customer for this green gas. That means that you take on the obligation of your own waste separation, and it is then collected separately.

[44] At the plant, they were pointing out two things. One is that they are offering gas at fixed prices for 15, 20 or 25 years—the period of the gate-price contract determines the price of the gas. It was a real shock—the idea that anyone could offer gas at a fixed price for 20 years just seemed mind boggling. However, they said, 'Well, we are not part of any international gas-trading system; we get it from our own waste'. So, that was one point. The second is that there are two wastes in the process. One is a solid waste, which turns out to be farm-grade fertiliser, and the farmers around Munich were saying, 'Look, we have been facing increases in the costs of our agricultural chemical fertilisers of about 180% to 200% over the last few years, so, if we can contribute and get it back at the same fixed prices, we are happy as Larry', so they were really pleased. The final one is a liquid waste residue that they have managed to turn into a biofuel. So, the vehicles that come to collect people's biodegradable waste are running on the fuel derived from previous contributions to the waste system. So, it is the creation of virtuous cycles rather than virtue-less ones that creates a very different notion as to how we deal with today's problems and turn them into tomorrow's solutions.

[45] How do we do it? It will be in diverse ways, but it is going to revolve around one-world thinking, and it is the ability to join the dots that is absolutely critical in this process. The UK has been a laggard in this process. As I said, I have done a lot of work with people in Germany, and, in the last discussion that I had with people at the embassy, they said 'We have transatlantic partnership arrangements with the USA, but we would be much happier to do it with the UK—for two reasons. One is that it is a lot closer and the other is that, culturally, there are much stronger similarities in our approach to energy management. But we struggle to find partners.' So, that, I think, is the challenge that I would want to leave on the table with the committee this morning.

[46] Partnership is going to require several different elements that we have not necessarily been used to or that good at. The first and the indispensable one, which is where you come in, is that there has to be clear political leadership. Without that, everything just gets lost in confusion and can be sabotaged. The second is that that political commitment has to be underpinned by an administrative back-up—designated staff who are told, in the same way as they are told in Germany, 'This is where we want to be; get out there, work out what the obstacles are, clear them out of the way and make this happen'. The third is that, in that partnership, there has to be the engineering and technology skills that will equip us to live in this different future. The exciting thing is that the people with those skills are almost queuing up, looking to engage in partnerships. They are not the conventional power companies, but they are the likes of Siemens, Deutsche Telekom, Apple and Google. They are the people who experienced the technology revolution and were able to drive a radical change in the way we thought about telecommunications. They are already well down the path of understanding that tomorrow's societies will run on smart homes, smart communities, smart cities and smart regions. The people who can bring the 'smart' into the partnership are essential components. The fourth is communities themselves. As I said earlier, the level of civic engagement in Germany is something that you can almost reach out and touch. They are people who are not just passengers; they are part of the solution. They drive it and they own the ideas. I think, in many parts of the UK, we have not been brilliant at partnerships with those who elect us at a national, at an Assembly or at a locality level.

[47] So, we have to relearn some of those partnerships skills and we have to then bring others in who will be partners and non-owners. I actually want to pay a quick tribute to Naomi from Friends of the Earth, who was one of my partners in crime in helping to set up some of the visits that we have done in Germany. However, it is about having people who will run with the ideas, without necessarily wanting to pinch a specific slice of the cake for their town, city, region or company. That is an essential part. Underpinning all of that, in the partnerships that the Germans would be keen to have with us, they also point out that, in every partnership area, their university is a core part of it. They want the learning curve to be one that they can share and pass around. So, building in institutions that have academic know-how is also a breath of fresh air to their institutions, because the danger for many of our academic institutions is that they have got fantastic intellectual know-how, but they just do not get out very much. They themselves have lost an ability to communicate with the rest of us about how to come up with real-world solutions.

[48] So, I have no doubt that you and your committee could drive this—it might take you a couple of weeks. [*Laughter.*] The UK is calling out for somewhere to give that sort of lead. Hand on heart, I cannot think of any part of the UK that has the natural resources that can match what it is that you have and the community resources that are still intact here. If anything could deliver a wind of change, it is you.

[49] **Alun Ffred Jones:** Diolch yn fawr iawn. Thank you very much, Alan, for that exciting presentation. I am sure that there are all sorts of questions. May I kick off with one? What drove the change in Germany? Was there a key, or a moment?

[50] **Mr Simpson:** Yes. It is hard to underestimate the effect that Chernobyl had on the German energy mindset. In many ways, I think you can trace a lot of this back to Chernobyl and to the first of the German energy co-operatives in Schönau, which is a small village, and there is now a very famous woman called Ursula Sladek, who was part of a local community that went to the energy company that serves that region of Bavaria and said, 'We'd just like to buy clean energy; we don't want to buy nuclear'. In fact, they just said, 'We don't want to buy nuclear; we'd like to buy non-nuclear electricity', and the energy company told them to push off. It was probably the worst decision that the company ever made, because the community went away and petitioned for the right to a referendum on the purchasing of their own energy. The franchise came up for renewal, and the energy company said, 'Well, it's going to cost you something like DM5 million to even bid in the franchise'. So, they put out an appeal around Germany, and people sent DM5 and DM10 donations, and they raised the money to bid for the franchise, and won. The actual real cost was cut to about a third, but that set a momentum that allowed them to talk about non-nuclear dependency. Schönau is just a village, but it now supplies, I think, over 110,000 businesses and customers around that part of Germany. However, it was the starting point of this community energy co-operatives movement, which has burgeoned in Germany.

[51] The second point on that is that they do begin from the advantage of having a decentralised governance system, which we have forgotten. So, their Länder and their regions actually have much greater powers of determination. There is not a political divide between the parties. There is a difference in parties' approach to that, and in those regions where the Social Democratic Party is in control, there are much more likely to be municipal energy systems. In the ones where the Christian Democratic Union is in control, they are more likely to be franchised out, but the terms of the franchise are all within the premise that you take clean energy before dirty, you take renewables before non-renewables, and, in those localities, they have different mechanisms for delivering the energy reduction part of the programme as well. So, that is where it came from.

[52] **Alun Ffred Jones:** I call on Julie, Jeff and then Mick.

[53] **Julie Morgan:** It is good to see you again, Alan. That was a very inspiring presentation, and it would be wonderful if we could do something like that. You have said what the impetus was in Germany—Chernobyl and what happened as a result of that—but what impetus could we have here to make this happen? You said that there has to be clear political leadership, but if you are saying that Wales would be an ideal place to get on this movement, how could that happen in Wales? What do you see as the way that something like this could happen?

[54] **Mr Simpson:** I think that this is a really good moment. Post the referendum in Scotland, there is now much more active engagement in the notion of what devolution means. I know that Westminster is sometimes bedevilled by the arguments about an English Parliament and English votes for English laws, but I have just said to colleagues there that anyone who thinks that England is a united item needs to understand that, by and large, the north does not give a hoot about the south and the south cares even less about the north. The question is: how do we restore democracy? This is the debate that I think is really hovering in the wings.

10:00

[55] That whole notion of political credibility, I think, comes down to a notion of democratic renewal. Energy, for me, is the clearest point of entry into a real debate about the refounding of democracy—in this case, an energy democracy in which people can play a part. We have never offered the public those choices in the UK, and the closest we have got to it is the idea of switching. I have said to some of the Westminster politicians, 'Look, if the choice that we're offering people is a choice between Fred West, Rose West and the Wild West, it is the wrong bloody game.' This is a rigged game and the public know this. They have enough problems in their lives without messing around, playing musical chairs between people who are all going to be putting up their energy bills. So, if we can take the debate into a different space—I would just say to you that there is a hunger among the public for politicians who are willing to come out and move the discussion into this space, because most people know that we live in the most fragile of times but with technology resources that may allow us to do things radically different at the same time as making their own personal circumstances liveable and manageable.

[56] So, that is what I think has to happen. If you like, the first act of courage is to lead that debate. As things stand, if you were to be doing that in Wales, you would have to be demanding many of the same powers that exist in Germany—the right to say, 'We will put conditions in that require localities to have the right to the first use of the energy that they generate for themselves.' We would have to have the right to stipulate that demand reduction is a part of the energy agenda. We would have to say that zero-carbon homes are not an unaffordable option but a prerequisite for going forward. So, your planning powers would have to be stronger than the ones that you are currently trying to work within. However, this agenda of political requirements would set the stage for a debate about different energy entitlements that would be translated locally. So, that is, I think, the starting point.

[57] **Alun Ffred Jones:** Thank you. Jeff is next.

[58] **Jeff Cuthbert:** Thank you very much. That was very interesting. I can assure you that I am old enough to remember red telephone boxes and also when you had to have a button A and a button B as well. [*Laughter*.]

[59] **Alun Ffred Jones:** You can give us a tutorial at another time. [*Laughter*.]

[60] **Jeff Cuthbert:** Yes, okay. It does strike me that what you have been talking about is consistent with the future generations Bill, which is one that will be beginning its process of

going through the Assembly very soon. It is a practical example of how there is no inconsistency between a prosperous Wales and a sustainable Wales. I am particularly interested—and this is my question—about the notion of more jobs in developing the type of energy generation that you have talked about here, because we have had witnesses saying to us that if we have more jobs, there will be more emissions. I do not accept that at all. It is a question of what the jobs are doing, and the green skills that are involved in them and so on. So, my question is this: in terms of what happened in Germany, what reskilling was necessary for people to take ownership of the generation of electricity? You did say that 34% was privately owned. Were there additional skills requirements needed for the owners or for those who they employed to make the installations, and how did—because you mentioned higher education—the educational institutions generally respond to those challenges for greater skills?

[61] **Mr Simpson:** Let me start at the end there. The institutions have loved it. They have really responded with relish and, more importantly than that, so have the kids. Skills are almost regarded as a civic entitlement and I can see, from the few training colleges that I have been round, the difference—. First of all, it stems from this notion that politicians give it to the engineers, the engineers are told to get on with it, and the training colleges are an integral part of an engineer's ability to deliver those solutions. So, there is a big emphasis on skills training in the colleges and the colleges are already operating on that different matter.

[62] One of the places that I went to had its laboratories, which were twice the size of this room, full of units that looked like vending machines for drinks and snacks, all on wheels, and they had different technologies in there. The teaching staff say that they get the kids in and after they have gone through the basics of how the different technologies work, they say to them, 'Get in there and connect a few up and see how they work.' That is going to be the key, namely not looking for one-club-golf solutions—they are going to have to know how things connect. I asked them if there were problems with that and they said, 'Well sometimes there is arcing between them, but the kids don't do it twice'. I was thinking that there are clearly health and safety issues there, but they have a much more exciting engagement with the learning process of delivering that shift in systems thinking, and our starting point is that we have not really grasped technology thinking, let alone got into the systems-thinking side.

[63] So, it is a real critical starting point. I think that that, again, is where a lot of European funding is going to be directed, namely into the skills base of doing that. The intriguing thing—going right back to my friend's advice to the board of one of the German big four—is that that company, six months later, laid off the entirety of its UK engineering workforce, working on CHP heating systems and took all of the jobs back to Germany. I had said to the guys who happened to be working on my CHP system at home, 'What do you mean, you're going? Where are you going?' They said, 'We're all signing on, because all of the jobs have gone back to Germany. The company here is now concentrating on its core business.' So, I said, 'What's its core business?' They said, 'Power stations'. It just seemed to me that anyone who has a ha'penny of sense is going to want to make sure that the skill training base that will deliver job security and energy systems security is an integral part of any shift in energy thinking.

[64] **Alun Ffred Jones:** At least five of you want to ask questions.

[65] **Mr Simpson:** Shall we take them in a block and then—

[66] **Alun Ffred Jones:** Mick, you are next, so bear that in mind as you ask the question.

[67] **Mick Antoniw:** Very quickly, the key motivator and direction, it seems, in terms of future energy security, is in terms of the shale gas issue, which obviously causes many of us a lot of concerns. Presumably that applies equally in Germany as well. How has that argument

been approached there? Do they talk about community ownership in the same way in terms of resources such as that or, basically, are things like that pushed to one side as a non-renewable et cetera?

[68] **Mr Simpson:** Shale gas is still banned in Germany.

[69] **Mick Antoniw:** So, it is completely excluded.

[70] **Mr Simpson:** Yes. I have to say that I think that it is a red herring for the UK. I have done several meetings on that. At one of them, I bumped into one of the head geologists for ExxonMobil. I was intrigued, because it had one of the pilot shale gas schemes in Europe, where it was test-drilling in Poland. Then, a year last February, it announced that it was all being curtailed. So, I said to him, 'Well, what happened? Did the Government catch up with you and start to ask for more money, or did it ask for much tougher environmental constraints and standards to be met?' He said, 'No, no, no, it's got nothing to do with that—we were given a free hand—but, the trouble is, we've been scuppered by a higher force'. He said, 'About 2 million years ago, some bugger scrunched Europe, and it's the geology that's doing us. In the States we have huge tectonic plates that go for thousands of miles—hardly anyone's around, we drill through, no one gives a hoot what comes out and what's released—so we're not really concerned about those. In Europe, it just isn't like that. Europe's geology is much more fractured, and you're not going to be able to do it. Our worry is that every test drill that we've done faces an 80% exhaustion rate in two years. For the cost of the drilling, we have to go deeper and deeper, and we can't get our money back. So, we're just going to take lots of cash—all the cash we can—from Governments that are willing to back the test-drilling, but we're not going to make it work here. It's much easier for us in the States.'

[71] So, I think that this is yet another sucker punch for the UK, and I would be tempted to say, go back to an approach that is about, first, using less, secondly, harnessing heat in different ways, and thirdly, harnessing waste. I think that National Grid, about five or six years ago, said that if we were serious about biomethane from waste, we could probably meet 50% of UK domestic gas needs by 2020, but it would require the building of, perhaps, 150 to 200 localised biodigestion systems. That is where I think the answers are going to come.

[72] **Antoinette Sandbach:** I wanted to go back to your understanding that Wales is probably the most likely part of the UK to be able to bring this idea forward. The national grid is not devolved, so the Electricity Act 1989 is separate from the devolution settlement, if you like. So, did the Germans build different grid systems that, ultimately, hooked into the main grid—you talked about localised grids? First, did they install different infrastructure? We have devolution of energy consenting up to 50 MW, so in theory, it would be possible, in Wales—if you wanted to do a renewable project—but our energy consenting only applies to projects up to 50 MW, and anything above that is UK Government. The second question was about the bank. You were talking about 1% loans—I presume over base rate in Germany—

[73] **Mr Simpson:** It is just 1%.

[74] **Antoinette Sandbach:** So, it is a flat 1%. Does that apply to private individuals, so that it is effectively a green-bank-type idea? It applies to private individuals, but what access does the bank have to the grid, if you see what I mean, if there is not connectivity to put it in? Or is that just for home improvements?

[75] **Mr Simpson:** Let me just deal with that part of the question first. The bank has no connection with the grid at all. If you decide that you want to put a solar roof on your house, the expectation is that you will go to your high street bank—your local bank—and you would be able to get the finance for that in the one meeting that you have. So, that is it. The normal connection time is within a month, so it is a given that that process is simplified and

accelerated to make it the sort of thing that citizens can do without losing the will to live in negotiating their way around the approvals system.

10:15

[76] **Antoinette Sandbach:** So, that is the main energy efficiency scheme; we have Arbed here, and various other schemes. Effectively, that money is going into a central pot, where citizens can apply for it via their high street bank at this finance level.

[77] **Mr Simpson:** Yes. Also, on the figures that I showed for the housing refurbishments, effectively, if you take the equivalent of the UK's top three energy efficiency or energy performance standards for homes, and if you hit the top standard—the near-zero carbon home standard—in addition to that 1% over 15 years, you get a 20% write off. If you reach level b, it is 15%; level c is 10%; and, for anything less you just get the 1%. There is a real premium on post-refurbishment assessments to see what the refurbishment delivers. I know that, in the UK, there have been lots of arguments about whether this is a paper set of standards that actually do not deliver. The Germans do not mess about with that; you only get the rebate if you meet the performance standards. That is how that part works.

[78] In terms of the grid, I do not know whether the German grid is different. I do not think that it is. What they have is very different assumed rights of access. What intrigues me here is that there is a discussion to be had with the distribution network operators that would be very different from the power station operators. The DNOs know that they do not have the cash for major infrastructure investment either. They also do not have—. They are not particularly wedded to buying power from the power companies. They would be happy to look at localised distribution systems; some of them already are. Those are really good potential partners to bring into the frame.

[79] Whether the Assembly has ownership rights is a separate debate for you to have. In the USA, states have rights to specify the performance of the DNO. They can specify that, for instance, a DNO has to deliver 5% carbon reductions a year. That forces the DNO into a very different set of discussions with the localities for their lighting networks and heating networks or whatever. In the UK, the fundamental problem is the access to the system. I am a net exporter of electricity from our house. I can supply it to up to two of my neighbours and that is okay, but a third would make me a criminal, unless I have £1.5 million to acquire a supplier's license. Most of us do not have that. You would not want—. The rules framework declutters that. There are some experiments in the UK that are quite interesting going down that path, but not London light, I fear. The most interesting in play at the moment is the one being run by Ovo Energy Ltd in conjunction with Plymouth, which is a sort of virtual local energy system. It is the bravest halfway step to where we need to be, but there are other ways of getting there quicker if there were—

[80] **Alun Ffred Jones:** Jenny is next and then I will see whether the other questions are on the same theme. Try to be brief now, in order to get the questions in.

[81] **Jenny Rathbone:** Thank you for reminding us of the importance of community solutions, but there are huge barriers. I think of only one in the whole of Wales, in the Amman Valley, and that is solar power on roofs that benefits community buildings in the area. Most people want to do the right thing and have clean before dirty and renewable before non-renewable. There are some small renewable energy suppliers in the UK. What are the barriers to them to grow much more than they have done—you know, compared with the monopoly of the big six?

[82] **Mr Simpson:** Do you want to take the others or—

[83] **Alun Ffred Jones:** Are you on this same theme, Joyce, or are you on a different theme?

[84] **Joyce Watson:** My question has been covered.

[85] **Alun Ffred Jones:** Right, okay. Are you on this theme, Bill?

[86] **William Powell:** It kind of relates to it, Chair. Thank you, Alan, for a really inspiring session this morning. I wanted to ask you to what extent you think we need a fundamental change in our approach to politics in this area. I know that Germany has had its own particular experience with the environmental movement, going back to Petra Kelly and Joschka Fischer and inspirational people who have really helped to change its politics. The German electoral system has also allowed people of that mindset to contribute to what has now become main stream. We seem to be more prisoners of our own electoral elections cycle and all that kind of thing. To what extent do we need a fundamental change in order to make the progress that you have said you think is possible?

[87] On one point of detail, in terms of access to finance in Germany, is it significant that they have a much more decentralised approach to banking, with the Bausparkassen, and more developed credit unions than the dominance that we have of high-street banks with their risk aversion to making funds available?

[88] **Alun Ffred Jones:** Let us try to go back to Jenny's question about—I have forgotten what it was now.

[89] **Mr Simpson:** The saddest thing about that is that when we set up the feed-in tariff framework, it was not within a Government budget. It was on the same model as the German model, which was to put it in their energy sector accounts and have it as a separate item there. The first battle that we lost—but we were told we had won—was post 2010 when it was saved by bringing it into the public expenditure framework and given a budget. That allowed Department of Energy and Climate Change officials to set a very distorted application of the German model. I was actually in DECC when that was announced, and a civil servant said, 'I hope you're going to praise the Minister for saving this, because it could otherwise have gone completely out of the window'. I said, 'We will; we will say 'absolutely well done'' and they said, 'It will be fine as long as people like you don't mess it up'. Why would I mess it up? They said, 'Well, if all of these bloody local authorities and housing associations start coming in with programmes, then the budget is going to be blown and it will completely mess it up'. I said, 'Whoa, hang on a minute; so you're saying this is going to be fine as long as it's a sort of trinket, and as long as the poor don't get in on the game it will work?' They said 'No, not like that; we have to be responsive'. Everything has been muddled since then.

[90] The industry grew phenomenally to begin with but has been bedevilled by a massive uncertainty about how the feed-in tariff rates are revised. No-one—no-one—disputes that they should be revised. I had a meeting with the Confederation of British Industry and John Cridland was saying, 'Look, we're not looking for a Government handout on this; we will bring our own cash to the table. We have shedloads of cash, but no-one is going to get it out of their lock-up garages or from under granny's bed or whatever to put into something when they do not know where it is going to be in three, four or five months' time. You are creating a massive sense of rolling insecurity.' That is a massive obstacle.

[91] So, there needs to be some degree of policy and political security in the 'how' of revising. It is not difficult to just move to a more serious adoption of the open, analysed and accountable way in which the German system works, so that digressions are built in, efficiency gains are passed on, and the industry thrives. That is the key lesson to learn. If we are just open and clear, then the level of sign-in is massive.

[92] Does this call for different politics? Yes, it does. That is why I think what we are engaging in is a re-founding of a much bigger notion of democracy: a democracy in which people are engaged as participants and not just passengers, and where they feel that they have an influence and they are able to hold institutions and elected members more effectively to account. I can say this, because I am not a politician anymore; I am just a recovering one. [*Laughter*.]

[93] **Alun Ffred Jones:** You are doing well. [*Laughter*.]

[94] **Mr Simpson:** It seems to me that, far from being a threat, this is probably the most exciting opportunity that has existed in my lifetime. As a kid, I grew up in a time where I genuinely thought that we were going to change the world and that it would take us two or three weeks to do it, but we just messed things up an awful lot. But, actually, there has never been a moment in history when societies have had access to the technologies that can deliver transformational change on a scale that could really free us all to live very differently.

[95] The issue now is not about technology but about our relationship to those technologies, and that requires a different politics. It will be led from all sorts of peculiar places, but it will happen, because what we have now does not work and is not reparable. That is the key. We have to move into a different space. It will be a strange sort of political momentum. For me, it is the counter-momentum—and this is the only political point that I will make—to where UKIP has been taking the debate, into a very negative space where we are fearful of each other and it massively accelerates insecurities.

[96] If you want to see why I think it calls for different politics, the German experience is really intriguing. It came out of that period when there was a red-green coalition in Germany and that momentum put in place all of the precursors of the Energiewende transformation. However, that coalition lost the plot, and Angela Merkel and the Christian Democratic Union took it up, and she is now the strongest driver of that. The last time we were there, one of her officials said that it would be an act of political suicide for parties to row back on this. The social ownership of the idea is now too strong for politicians to abandon it. So, I would say that there are absolutely enormous gains for whoever is seen to be taking leadership, but it needs to be visionary and it needs to be open and inclusive.

[97] **Alun Ffred Jones:** Thank you very much. Do you want to comment on the banks? We did ask a question about whether the banking system in Germany—

[98] **William Powell:** It was about access to finance and the German tradition of more localised banks.

[99] **Mr Simpson:** Sorry, yes. Again, that is very helpful, but, for me, the critical point is the role that has been played by the KfW bank in de-risking the process. It has de-risked it for everyone in the game, and a lot of people will tell you that the real insecurities and costs are in the pre-planning and pre-construction stages where people can spend a lot of money and lose it all. Well, KfW de-risks that. It de-risks it for the banks, and it sets very clear preconditions that have to be met as the social hurdles for approved developments, but once all those hurdles have been engaged with, the process happens very quickly. So, we would not need a devolved banking structure to make that happen in the UK. It might help, but it is not a necessary prerequisite. It is about de-risking the process and clarifying the rules of the game, because, for most levels of governance in the UK, I think the experience has been that, for developers of whatever sort, it is a game about gaming the system. How far can you blackmail authorities into accepting poorer deals: if you do not, we will take it somewhere else?

10:30

[100] What the Germans say is, ‘Look, these are the terms of the deal—if you do not like it, go somewhere else. If you think you can make more money in Bangladesh, make it in Bangladesh. However, actually, this is where energy is going to be delivered, distributed, saved and shared, and so, if you want to be a player, these are the rules of the game’. So, that role of leadership from the centre has been much more pivotal than the ability of localities. They deliver the outcomes; you deliver the change.

[101] **Alun Ffred Jones:** That is a challenge, anyway. Thank you. [*Laughter*.] I wondered, initially, whether we would actually fill an hour and a half this morning, but, in fact, we could, obviously, go on. May I thank you, on behalf of the committee, for coming here and giving such a thought-provoking presentation? It has really made us think, and, hopefully, we will act on the thinking. Really, it has been inspirational. Thank you very much for coming along, Alan.

[102] **Mr Simpson:** It has been my pleasure, and I will happily come back, if you want me to.

[103] **Alun Ffred Jones:** Perhaps we will ask you to come back—to wake us up. [*Laughter*.]

[104] Diolch yn fawr iawn. Thank you very much.

10:31

Papurau i’w Nodi
Papers to Note

[105] **Alun Ffred Jones:** What about the papers to note? Are Members happy to note them? I see that you are.

Cynnig o dan Reol Sefydlog 17.42 i benderfynu Gwahardd y Cyhoedd o Weddill y Cyfarfod
Motion under Standing Order 17.42 to resolve to Exclude the Public from the Remainder of the Meeting

[106] **Alun Ffred Jones:** We will go into private session, if Members are in agreement. I move that

the committee resolves to exclude the public from the remainder of the meeting in accordance with Standing Order 17.42(vi).

[107] Agreed, okay. We will go into private session and have a break.

Derbyniwyd y cynnig.
Motion agreed.

Daeth rhan gyhoeddus y cyfarfod i ben am 10:32.
The public part of the meeting ended at 10:32.