HOUSE OF COMMONS

Welsh Affairs Committee

Oral evidence: the future of nuclear power in Wales, HC 699

Monday 25 April 2016

Ordered by the House of Commons to be published on 25 April 2016.

Written evidence from witnesses:

- Gwynedd County Council
- Snowdonia Enterprise Zone Advisory Board
- Isle of Anglesey County Council
- Anglesey Enterprise Zone Advisory Board
- Grŵp Llandrillo Menai
- Energy Fair
- Pobol Atal Wylfa B/People Against Wylfa B
- Neil Crumpton
- Cyfeillion y Ddaear Cymru/Friends of the Earth Cymru

Watch the meeting

Members present: David T.C. Davies (Chair); Dr James Davies; Liz Saville Roberts

Questions 142 – 192

Examination of Witness

Witness: **Dyfed Wyn Edwards**, Leader, Gwynedd Council, **Mandy Williams-Davies**, Cabinet Member for Economy, Gwynedd Council, **Sioned Williams**, Head of Economy and Community Services and Member of Snowdonia Enterprise Board, Gwynedd Council, and **John Idris Jones**, Chair, Snowdonia Enterprise Zone Advisory Board, gave evidence.

Q142 Liz Saville Roberts: Thank you very much for coming and for providing a summary of the main facts. What you said about Meirionnydd is true: looking at the figures for last November, wages are the lowest of any constituency in Great Britain. On top of that, on average, wages are decreasing. People have to travel a long way to work—almost half travel more than 30 km. More than half are on low wages. We are very dependent on agricultural

and tourist wages, and public sector employment is shrinking. Historically the nuclear industry has been key to the area, but of course during decommissioning—and there are questions about the process—there are fewer jobs. What do you believe to be the nuclear industry's significance to areas such as Meirionnydd?

Dyfed Wyn Edwards: Thank you for the question. It is important for everyone who is not familiar with the area and the county to understand the context fully. We are talking about a rural area. Indeed, the constituency of Dwyfor Meirionnydd has so-called "deep rural areas". The population is scattered and there is a shortage of services and companies. In the middle of all that, the Trawsfynydd site has maintained the employment of hundreds of people for more than 50 years and has therefore served some of Gwynedd's principal towns, such as Blaenau Ffestiniog, Dolgellau, Porthmadog, Penrhyndeudraeth, and even down towards Tywyn, Pwllheli and so on. The power station in Trawsfynydd has therefore attracted people from a wide area. I believe that around 90% of people who work in Trawsfynydd come from the local "LL" postcode. That is the significance. Consequently, there has been an opportunity to secure higher wages than average and to provide a career in industry. We must also emphasise the concept of a nuclear industry in the north-west, and the link between Wylfa and Trawsfynydd is important not only now, but throughout the decommissioning process. The skills can be transferred from one site to the other, and the sites can support each other. The nuclear industry has existed here since the 1960s; decommissioning is happening now and offers employment, but the number of jobs is decreasing. At the top of our agenda is ensuring employment that offers careers, especially for young people, and higher wages, thereby making a vital contribution to sustaining our communities and to social cohesion. We also want to give a boost to places that face an exodus of young people and need that employment to try to ensure that those young people stay in the area and that the Welsh language and our culture endures.

Q143 Liz Saville Roberts: Today we are concentrating on the nuclear industry. To put that industry in context, what efforts have been made to attract other industries or sectors to the area?

Sioned Williams: There have been efforts to target different sorts of businesses, and not only on the Trawsfynydd site. In 2010, industries were facing challenges in Bala, Blaenau Ffestiniog and Tywyn. They were big employers, on which communities depended. There was an attempt to consider what sorts of businesses or industries would move to an area such as Meirionnydd. Of course, this was during the recession. It is fair to say that it is obviously a challenge to attract industries to predominantly rural areas. There was the Cynllun Cyflogaeth Meirionnydd—the Meirionnydd employment plan—which tried to come to grips with the challenge. There was some joint consideration through a partnership with the Welsh Government, of a range of businesses that might come to the Trawsfynydd site in the future. We cannot ignore the decommissioning. The strength of the site is its excellent energy grid connections and infrastructure and there was an attempt to consider what could be done with that. However, given that the site is in the process of being decommissioned, without certainty about the long-term commissioning plans, it was difficult to persuade any company to invest in the site. There were lots of ideas and many companies showed interest, especially when the site was designated as an enterprise zone. However, given that there is a nuclear decommissioning site there, other economic opportunities were few. The Cynllun Cyflogaeth Merionnydd strategy has tried to build on the strengths of the area. Through the campaign to target outdoor sector businesses, which

takes advantage of another strength of the area, 200 jobs have been created, especially a cluster in the Blaenau Ffestiniog area, in Coed-y-Brenin and in Bala. However, I go back to what the Leader of the Cabinet said about wage levels. Average wages in Merionnydd are £20,000 a year. In Trawsfynydd at the moment, average wages are £55,000 a year. There is quite a gap between the county average of £20,000 and £55,000. The average wage for an administrative job in Magnox is £25,000, which is again higher than the average for the area. We could therefore target lots of jobs in some sectors and make no impression on changing the state of the economy. Targeting high-value jobs would create more opportunities in the area and that was at the core of the strategy.

Mandy Williams-Davies: I simply add that a high proportion of women get the lowest wages in Meirionnydd, and I am concerned about that. Opportunities for careers in energy and in technology can create stability for people who do not want to move, especially women. We need to have open minds about what is possible as a career other than the traditional paths. It is worrying that women earn the lowest wages in Meirionnydd.

Q144 Chair: Mr Edwards, perhaps you have already answered this, but why do you think that it is important for Meirionnydd's status as a Welsh-speaking area that the project goes ahead? Are you not worried that lots of people will come in from England and elsewhere and the effect that that will have on the Welsh language?

Dyfed Wyn Edwards: If we consider the historical development of Trawsfynydd nuclear power station, employment there has contributed more to sustaining the Welsh language than any strategy, legislation or even language standards. Employment—securing jobs for people in the area—is vital. I cannot overemphasise that because it makes such an important contribution to sustaining the economic and social infrastructure there. Without jobs, we cannot maintain anything else. You asked about people moving in as a result of building the power station. If you consider Trawfynydd's history since the 1960s, you initially need the specialist skills to build a power station that obviously come from outside, as happened with Wylfa, and will possibly happen with Wylfa Newydd. However, that work force is temporary. Some choose to stay and, given the pioneering language policy in our schools, which continues to make a difference, families, especially children, fit into the local community, learn Welsh and indeed, use it as their main language. I therefore have no concerns about that. Trawsfynydd and our county have a history of succeeding in such situations. I therefore do not see the project as a threat. It is realistic to accept that, with any development of that size, wherever it happens, a work force will come from outside because of the specialist skills that are needed at the beginning. That work force is often temporary, and will move to other sites in the industry. That leaves the permanent work force, which in Trawsfynydd has comprised 80% or 90% of Welsh speakers. That is astounding.

Q145 Chair: That is interesting. I agree with you 100%, but to play devil's advocate for a moment, I would expect you to worry about the matter because it is difficult to find people with the skills to build a nuclear plant. Having said that, if you are confident that people will learn and use Welsh, that is very positive.

Dyfed Wyn Edwards: We can be confident because of what has happened in the past. With major developments, you have to consider mitigation measures to deal with any worries. However, in the case of Trawsfynydd, we are not talking about a huge development in terms of numbers of people. We are not talking about the numbers that

came in the past—perhaps 400 or 500. As a county, we are comfortable with directing the economy at securing employment at that level.

Q146 Liz Saville Roberts: This is a question for John Idris Jones. Is there a question about sustaining the skills that we already have between Trawsfynydd and Wylfa, the nature of the decommissioning process in Trawsfynydd and the timetable of developments in Wylfa? We need to maintain the skills.

John Idris Jones: It is important that we are aware of the need to maintain the skills. For example, Grwp Llandrillo Menai and the Welsh Government are investing in developing energy centre in Llangefni to train young people in the skills. We need to be proactive in schools to open young people's eyes to the opportunities that are before them in the next 60 years. On retaining the skills in the area, work is ongoing in Traws and Wylfa, and I anticipate people moving between the sites. It is important to ensure an increase in the number of people who enter the industry. We are talking about the construction industry, so there is an opportunity for companies throughout north Wales to work with the main suppliers in Wylfa Newydd and any development in Trawsfynydd. We must also remember that, if we are talking about small reactors, much of the production work will happen off site and there will therefore be opportunities to develop factories and to diversify factories in areas in, for example, north-west Wales.

Q147 Dr James Davies: Diolch. Bore da. The Committee visited the site of Wylfa Newydd in Ynys Môn several weeks ago. What impact do you think that that development will have on the economy of Gwynedd?

Sioned Williams: There are no two ways about it—Wylfa will have a substantial effect on Gwynedd's economy. We must remember that there is only a river bridge between us. I do not believe that the economy respects borders in the same way as perhaps local authorities do. We therefore hope that workers from Gwynedd will have opportunities in Wylfa, and that companies from this area will have a chance to be part of the supply chain. Gwynedd Council has been working with Anglesey Council for some years, and with the North Wales Economic Ambition Board. It recognises priorities and Wylfa's importance to north Wales's regional economy. Work has been planned deliberately to ascertain key elements such as the necessary supply chains, skills and infrastructure. That infrastructure is vital to Wylfa.

Dyfed Wyn Edwards: There has been a close relationship between the two sites over the years in organising resources and skills. The situation is interesting with Trawsfynydd decommissioning, and the current Wylfa power station will also decommission. There is a close link between the work forces. Then the development of Wylfa Newydd will give employment opportunities to the people and businesses of Gwynedd. I also believe that it means an opportunity to strengthen industry in the north-west of Wales and to upgrade the role of Bangor University and research. There is a real opportunity for the university to play a prominent role in research in the industry in general, and to combine the development of Wylfa Newydd and a potential development in Trawsfynydd with R&D needs. Bangor University is well placed to do that in collaboration with other establishments in northern England, with a connection to the northern powerhouse, but also universities in London—I am thinking of one in particular—that specialise in the field. That emphasises the connection between Wylfa, Trawsfynydd and the industry generally. It is not just about jobs, supply chains but research developments.

Q148 Chair: You are speaking very positively about the nuclear industry. However, how many people are against Wylfa B? Is it possible to estimate how many people are against it?

Dyfed Wyn Edwards: That is a very good question. I have not personally undertaken a survey. If you ask people in Gwynedd and Ynys Môn, of course, you will get two opinions, but under the surface, you will find a population that has got used to the industry and has some understanding of it. People from Blaenau Ffestiniog, Penrhyndeudraeth, Porthmadog and so on work in Trawsfynydd. We are in danger nowadays of opposing anything that produces energy. Some people oppose nuclear development, renewable energy and any pylons that carry energy. I have changed my mind about nuclear power. I was very opposed to it in the 1970s and 1980s, but I now see that climate change is an emergency. We also have a crisis in Britain of securing an energy supply. I do not often use the word "crisis", but that energy crisis means that, if we are not careful, we will not be able to flick a switch to get electricity. Securing a safe energy supply and contributing to giving hope to the next generation that the world will not face a greater crisis—that is my view. There is a public discussion to have about the matter, but generally, although I respect the fact that there are two views, in this part of the world, we have an industry that has been an integral part of our communities for more than half a century.

Mandy Williams-Davies: I represent the Blaenau Ffestiniog ward, and in Ffestiniog,, historically, we had the quarries and we have been self-sufficient in producing electricity since before the second world war. We have the Tanygrisiau hydropump that produces electricity, and also the Maentwrog site. There is an understanding of producing energy historically. Of course, there are objections and there is a discussion about explaining technology. However, we are used to living with energy generation in our local communities. That takes us back to having a career in the industry and transferable skills. That is very exciting. We are talking about inspiring eight-year-old children to learn about technology, physics and so on. There are exciting opportunities for our children.

Q149 Liz Saville Roberts: There are several ways of decommissioning Trawsfynydd. Is the way that Magnox and the other companies working with it are using the most favourable method for the local communities? Are there other methods or approaches? Looking to the future, what is your opinion of the potential and challenges of small modular reactors.

John Idris Jones: On the method that Magnox is using to decommission Traws, my understanding that, until 2028, it will leave the site with two reactors in safe storage. There is the potential to show that a site can be cleared of a reactor. Doing that in Trawsfynydd could be of great benefit, not only to the nuclear industry, but to the local community. It could mean continuation of work on the site and use of expertise. There is therefore an alternative way of doing this. With small reactors, there is the potential to combine decommissioning with constructing small reactors on the site. There is no need to clear the site, but it would be good to do more work to ascertain how far Traws could be decommissioned to release land for constructing a small reactor. The Traws site is ideal for creating the first site for a small reactor in Britain. It is close to places such as Tanygrisiau and offshore wind farms in Colwyn Bay. Why is that important? One has to ask the question, why build an SMR in the first place? There is work to be done to show that managing the frequency of the national grid can be done through renewable energy in Tanygrisiau. We can also demonstrate the use of heat from small reactors. Work has been done to show that heat from small reactors can be used to do other things. In my opinion

and that of others, the best way of doing that is to do it on the site first to show how steam can be taken out of a turbine, and a steam store can then be used on the site. The site at Trawsfynydd lends itself naturally to such a first development.

Q150 Chair: Have you anything to add?

Dyfed Wyn Edwards: John has far more technological knowledge than me. If I can make more general points about Government policy, we have here an opportunity to achieve several things. We have a suitable site, a work force that has been educated in the industry and communities that have been involved with the industry for a long time. We also have the possibility of a link with R&D and the northern powerhouse, one of the Chancellor's favourite things of course. It is good to see a possible connection between industry in northern England, Trawsfynydd and Wylfa. There is therefore a genuine possibility of looking at Trawsfynydd as a way of developing the concept of a small reactor, SMR, which can then be a base for manufacturing something for Britain's GVA that needs to be addressed. In addition, as Liz Saville Roberts and several of us have said, the area is bleeding young people, suffers from low wages and there are people in work who are living in poverty. Such a development would therefore offer higher wages and deal with those three aspects.

Q151 Chair: I do not know much about SMRs either, but we have read written evidence, I think from Friends of the Earth, saying that anywhere that has tried to develop an SMR has failed. Only China has some sort of SMR project. South Africa and other places have failed. We do not want a situation whereby the Government spent millions of pounds on projects that have failed in other parts of the world.

John Idris Jones: About a fortnight ago, I was at a conference in the USA. The enterprise zone thought that Trawsfynydd had such a strong case for developing an SMR that I went over there to speak about Trawsfynydd. It is interesting to note that some companies in the US are developing small reactors and one company is talking about constructing small reactors to generate electricity. There is a utility called UAMPS in Utah that is talking about constructing a NuScale small reactor. The governors of states in the west of the US are looking at the possibilities of such developments in their states. The Tennessee Valley authority is talking about developments by the Clinch river. Companies in Canada are talking about small reactors being ideal for communities in the north of the country as well as for communities closer to the towns. It is therefore incorrect to say that this technology is not developing and, of course, there is interest here in Britain.

Dyfed Wyn Edwards: One thing worth noting is that the Westminster Government have opened a competitive process to identify the technology and of course we welcome that. In Wales, we have tried to combine identifying the technology with identifying a site. In many people's opinion, identifying the technology without identifying a suitable site is deficient. We need to find a suitable site for the technology. I therefore hope that the process will be revised. Combining the site with the technology is important.

Q152 Liz Saville Roberts: What makes Trawsfynydd suitable? We have heard from one of our witnesses that the heat that is produced as a by-product needs to be used in an adjacent town. Although Blaenau is quite close, perhaps such a town needs to be larger than Blaenau.

John Idris Jones: Traws is suitable because of local support for and knowledge about the first small reactor of its type. If a company wanted to construct a nuclear power station for generating heat close to a large city, without a lot educational work, there will be opposition. The way to do this is to build the reactor, show the method of generating heat in somewhere like Trawsfynydd so that other communities can visit and talk to people in the community around Traws and the see the positives and the negatives.

Sioned Williams: Another aspect that makes Trawsfynydd special is that the site is owned by the Government. That is a key factor when considering developing small reactors. SMR is not new technology, but combining it with heat is. If someone is to develop the first plan of its type, it is sensible to locate the development in a Government-owned site. There are several other such sites throughout Britain, but this is the only Government-owned site where it makes sense to develop SMR technology.

Q153 Liz Saville Roberts: Would that reduce costs for the Government?

Sioned Williams: There is currently a competition process, but the cost of developing SMR is obviously substantial. It would give added value to Britain's taxpayers if it was developed on the Trawsfynydd site.

John Idris Jones: A recent report by KPMG talks about a process whereby the Government could construct SMR. As part of that, the KPMG people mention the Government's giving a site as part of the equity. I will leave a copy of the report with you.

Chair: James, do you want to come in with any further question because I think we have just about covered everything?

Q154 Dr James Davies: In the absence of development of an SMR, are there alternative options for the Trawsfynydd site?

Sioned Williams: We are promoting SMR development on this site because we have looked at every other option. There is another opportunity for a data centre on the site, but that would mean about 20 jobs. There is no comparison. They are high value worth having, and ideally we would have the data centre and the SMR. There are other opportunities, but they would provide few jobs and lower wages. Tourism provides opportunities, but we must remember that the decommissioning will continue on the site for at least 80 years in one way or another, and that will increase the risk for any investor in any alternative use.

Chair: Thank you very much. I will read the report with interest, Mr Jones.

Examination of Witnesses

Witnesses: **Ieuan Williams**, Council Leader, Isle of Anglesey County Council, **Dylan Williams**, Head of Economic Development, Anglesey County Council, **Dr Gwynne Jones**, Chief Executive, Isle of Anglesey County Council, and **Glyn Jones OBE**, Member, Anglesey Enterprise Zone Advisory Board, gave evidence.

Q155 Chair: Welcome. Thank you for coming. I hope you will feel free to add any information that you think is important for us to consider. Does anyone want to begin with some sort of introductory statement?

Ieuan Williams: Thank you very much. Welcome. Thank you for the opportunity of submitting written evidence. We are pleased to have the chance to answer any questions that you want to answer this morning. Perhaps we are closer to seeing the reality the development of Wylfa Newydd. We co-operate closely with Horizon at the moment. We have a PPA—planning performance agreement with them. We have the resources that are necessary to consider the off-site developments that need planning permission from the council. You mentioned side-effects on the language earlier. We have already given permission to accommodate workers in Holyhead on the former Anglesey Aluminium site. We acknowledge the concern among some in the community about the technology and waste. However, there is more concern about grid connection. We must take that into consideration. It is important to convey that a precedent has been set at Hinkley for the proximity principle to the communities that host such power stations. The national importance of the development means that that is acknowledged, and there will be some sort of reward for the community from the Government once the site is operational, as is the intention at Hinkley. It is important to acknowledge the part we play in de-risking huge developments like this.

Q156 Dr James Davies: Thank you for the introduction. How critical do you see the development of Wylfa Newydd to the Energy Island concept?

Dylan Williams: Bore da, good morning. The Energy Island programme was established by Anglesey County Council at the end of the last decade. It was a response to the loss of over 1,000 jobs, potentially 1,000 jobs, which was threatened by the then closure of Anglesey Aluminium and that of the current Wylfa power station. The importance of the quality of those jobs has already been mentioned this morning, but just to add to the statistics, the average salary on Anglesey is about £21,000 to £22,000. The average salary at Wylfa and Anglesey Aluminium, when both were operational, was about £35,000. It is not just the numbers, it is the actual quality of the employment opportunities as well.

It is an economic development strategy rather than just an energy development strategy because of the magnitude of the projects that we are talking about. One of those large infrastructure projects has currently ceased. At the beginning we also had the Celtic Array project, which was the offshore wind farm, but because of technological issues it is not going to go forward. Good progress has been made. Over 60 direct jobs have already been created by the programme and, in addition, there are indirect jobs. Wylfa Newydd is progressing, but we also have the Orthios eco-park on the Anglesey Aluminium site, which could create over 1,000 jobs in terms of biomass and food production. We have the Minesto tidal array project from Sweden, who have secured European funding and Government support. They are into double figures in terms of local employment already. Only recently, 11 companies have expressed their interest in testing their technology in the Morlais tidal array energy demonstration zone, so there is a real opportunity for Holyhead and the port specifically to redefine itself as a centre of excellence for marine technology. The science park at the university is progressing and the initial infrastructure works are about to commence there next month. A link road is going in and Llangefni, which I am sure will be mentioned, will be redeveloped as a centre of excellence. The Land and Lakes leisure village is another potential 1,000 jobs, which was consented only last week.

When you put it all together, it is a very exciting economic development programme, which is progressing nicely but we would like to see more jobs created, earlier and sooner.

The backbone of that strategy is clearly Wylfa Newydd purely because of the scale and the magnitude of the jobs. We have to remember that Wylfa Newydd is two projects, really. One is the build period where there will be a transient workforce and major opportunities and major risks and challenges that will have to be managed. At the end of that, it is going to run for 60 or 70 years as a major local employer and hopefully, if the current safety and operational levels are adhered to, it will be a major benefit to the local and regional economy.

Q157 Dr James Davies: If the backbone of the Energy Island does not proceed, ie Wylfa Newydd, are there any contingency plans other than all of the other projects that you mentioned?

Dylan Williams: I do not think you can have a contingency plan for such a large-scale, complex and unique project, specifically in such a rural area such as Anglesey. I think it is very much required if we are going to turn round the current out migration. Anglesey currently has about 19,000 jobs; Wylfa Newydd is predicting 8,000 to 10,000 during the build period for about six or seven years, so you can see the magnitude and the importance of the project. The 850 jobs during the operational stage for two to three generations are of a quality that would be very hard to attract from other industries because of Anglesey's location.

Q158 Liz Saville Roberts: You mentioned the grid connection. Have you any concerns about capacity with this development and others in north-west Wales to connect to the grid?

Ieuan Williams: I do not think that there is any concern about the ability to put capacity in place. When you look at the technology that is intended to be used—pylons—there is a worry about that. One of our main industries, after Wylfa, is the public sector—the council employs the highest percentage of people there—and then there is tourism, which is vital. It means more than £254 million every year to the island. There is also agriculture. Farmers are worried about putting more pylons on the land. I am also concerned about the effect on tourism and local businesses that are close to the line that runs across the island. Our preferred solution would be to go underground from Wylfa to Pentir. I am sure that there is a way of doing that and that a wind farm in Lincolnshire has gone underground for 30 km from the coast to the nearest substation. Perhaps this Committee could put some pressure on the grid to consider an alternative method of making that connection.

Q159 Liz Saville Roberts: You also mentioned de-risking for the local community. Did you mean a wider community than Anglesey? What did you mean by de-risking? Can you say more about it?

Ieuan Williams: Obviously, we are responsible for granting planning permission for associated off-site developments. Resources are needed for that and we have secured them. We have also co-operated closely with Horizon since they bought the site. We have given planning permission for accommodation for 3,500 temporary workers. If those workers were in our communities, perhaps that might have an effect on the language, but as I understand it, in the 1960s, the construction workers tended to stay and bring their families with them. Now that transport is so much better, people come for a week, leave for three or four days and return. We are trying to ensure that accommodation for the workers is available. By the end of the year, we expect a planning application to improve the road A5025 from Valley to the site. That facilitate transport.

Q160 Chair: Has anyone in the council had a discussion with Horizon about reducing energy prices for the industry? Is that possible? I understand that the suggestion has been made.

Ieuan Williams: As a council, we have not spoken to Horizon. It is a commercial company, and that sort of negotiation will happen between them and the Government. Obviously, we are keen to establish a fair low price, which will mean that electricity is cheaper is cheaper for industry, not only locally but nationally. However, it is not a matter for us.

Chair: I agree with you.

Q161 Dr James Davies: We have already touched on the potential impact of Wylfa Newydd on infrastructure, but would you like to add to that in terms of local services and the impact on the Welsh language?

Dr Jones: Thank you for the welcome this morning. As my colleague said, there are two periods of work at Wylfa: the short-term construction work and the long-term generation work. At the moment, we are closely co-operating, as has been noted, with Horizon on the environmental impact assessment. However, we need to see that before we can give any detail of adverse effects. At the moment, there is discussion about the effect of moving earthworks on the site, the construction work that could happen for 24 hours a day, seven days a week. You can imagine that there will be noise and an effect on the environment around that work. There is also the movement of materials needed for the work. One can foresee much movement of lorries. There will therefore be a significant impact on the environment during the construction period. You have heard about the proximity principle. That will mean an effect around the power station, an effect on Anglesey, an effect on Gwynedd and an effect on north Wales, too. We are fully conscious of the sort of contribution that we need to make. Let me throw a few figures in. It is predicted that, at the peak of the work, there will be 10,000 workers on the site. Of those, about 7,000 will need some sort of accommodation. That could put pressure on the housing market and on services such as health and leisure. We are in discussions about dealing with that sort of effect. We are also keen to ensure that one of our important industries, tourism, which the Leader of the Council mentioned, is still functioning on Anglesey, even during the construction period. We obviously need a detailed discussion with the developer about mitigating the effect on tourism. Earlier, the Welsh language and culture were mentioned. Such numbers of workers are a challenge to ensure that we protect the language, communities and culture. We are again discussing mitigation measures carefully with the developer. As the Council Leader said, one way of doing that is through giving permission for more than 2,000 beds in Holyhead. Keeping those workers together goes some way towards to mitigating the effects on the language.

Q162 Liz Saville Roberts: A general question. How would you describe the island's opinion of Wylfa Newydd?

Ieuan Williams: I believe that a high percentage of population is supportive because the industry has existed in the area for more than 40 years. If we take Amlwch, Cemaes and Llanfechell to Holyhead, we talk about people coming over the bridge to work there. We are talking about generations here. My grandfather worked at sea and then came to work at Wylfa at the end of his working life. My father worked there. We have grown up with the

idea of the reactor. We understand that the skills bring good wages. Thousands of people through the generations have been trained there. If they have not stayed working there, some have gone to work all over the world. That is the main reason for the support. Obviously, there is some opposition. Some object to the technology on principle and the resultant waste. We understand that. Then some see connection to the electricity network as an integral part of the project, and it is. That creates some opposition. However, Wylfa has brought good jobs and wages, and that is why there is support for it. I meet people from all sorts of backgrounds throughout the island and most tell me that they Wylfa Newydd cannot come too soon. That is message I mostly hear.

Q163 Chair: The main political parties support the project. Have the people who oppose it stood in any elections? Have they won any council seats?

Ieuan Williams: Not that I know. As you say, the main parties, including Plaid Cymru, which is anti-nuclear nationally, support Wylfa. There is a feeling, not just on Anglesey, but more widely, as you saw today, that Plaid Cymru, which leads in Gwynedd, supports Traws because of the opportunities for employment and wages. Some people travel for up to 90 minutes to the site to work. There will be opportunities for people on the mainland to work at Wylfa when the site is operational. I therefore believe that there is support.

Dr Jones: I just want to add one or two points. You have heard several this morning that are relevant to this. Perhaps I can put some statistical value on the project. You have heard about improvements to the economy—there is a strong possibility that the project could do that. There is also the benefit to well-being and there is potential to strengthen the Welsh language. You have also heard about opportunities for young people. For me, that is key. It is vital that we can take advantage of the opportunities that arise during the construction period and the generating period so that local people—"local" means north Wales in this context—have the skills to take up the work. The last point, which has also been mentioned, is that we are very keen for the island and more widely, through connections with the university and its links with prominent higher education institutions to develop to become a specialist centre for training in the field. We want to offer an opportunity for that to happen.

Q164 Liz Saville Roberts: I feel that I ought to note that Glyn Jones is my former boss. As I have just admitted that I previously worked in further education in Coleg Meirion-Dwyfor, which has sites in Glynllifon, Pwllheli and Dolgellau and is part of Grwp Llandrillo Menai, I was very conscious of the fact, especially with our A-level students, that we were training a high percentage of our young people to leave. We want to give our young people the best opportunities possible. I hear that there are engineering centres in Llangefni, Llandrillo and Dolgellau. What is the potential for the economy to give more opportunity to keep young people in the north-west?

Glyn Jones: As you said, the challenge is trying to keep young people in the area. These developments are key to getting big employers and high-quality jobs with good salaries for our young people to aim at so that they do not have to consider crossing the border to England to work. The project is therefore very important to creating the opportunities. It is also important that local businesses take advantage of the opportunities that the supply chain offers. There is also an opportunity for investment in R&D and developing other work around Horizon. We feel that this is important and we are co-operating with Horizon and Hitachi. The greatest challenge will be the growth in the demand for construction

work in the next seven to 10 years. We are a bit worried about that because it requires about 10,000 jobs and we are not quite sure what sort of jobs they will be, although we have received information recently about the sort of work that is needed. We know that there will be at least 500 apprenticeships on the site. Many people who work in the construction industry throughout north Wales will move to Horizon and the project. That will leave a gap in other companies. There will be a bit of displacement problem and we will have to work with developers to ensure that the majority of people who are employed come from north-west Wales and to ensure that, when there is a negative effect on small companies that lose workers, that the major project gives them opportunities too. In the long-term, we are more confident of our ability to work with companies to ensure that the necessary skills are available. We are currently working closely with Magnox, as we have done for years. We have begun a scheme with Horizon, and the first group of apprentices start with us in September. Between six and 20 will start then, and that number will grow every year until we reach 250 who are ready to work on the site when it is operational.

Dylan Williams: Employment is vital locally. Local people and companies taking advantage of the development is vital to retain the support that exists. Much work is already happening, but there is a need for a bespoke response because of its size and scale. Specific skills programmes and STEM programmes are required. There are 10,000 unemployed people in Anglesey alone[1]. We need a programme to target that so that there is a legacy. We co-operate with the college, the Government's ambitions board and Horizon on employment brokerage. That will not only ensure that people come through with the skills to take advantage of the jobs but help existing companies that have lost people to respond to displacement. There will be some negative effects, but we need the infrastructure, skills and support for business and more of a bespoke response from the public sector. We need to co-operation to ensure that north Wales and Anglesey take full advantage of the opportunity, and that we do not let our communities down.

Glyn Jones: We are working with the DWP to establish offices in Llangefni, Holyhead, Caernarfon and Llandudno. We offer a service to local companies to local people who are out of work so that they can come to one place to ask about opportunities on the construction site to begin with. We are also redeveloping our campus in Llangefni. There is an opportunity to double or treble the numbers of students there. We are moving our engineering site from Bangor to Llangefni, and we are working with Horizon to develop a centre of excellence. There will be a specific building with a simulator and so on to practise the work of fitting reactors.

Ieuan Williams: As Dylan said, it is important that the whole public sector works together. The opportunities available are great. There is an opportunity to contribute nationally and we have worked regionally with the north Wales ambitions board. There is a skills work stream. We need to work with the Welsh Government and the Westminster Government and DECC. We must all appreciate the project's strategic importance.

Chair: Did you want to come in, James?

Q165 Dr James Davies: If I may. As a north-east Wales MP, I am very interested in infrastructure improvements to rail, particularly to link in with HS2. What importance do you

[1] Note by witness: The figure of 10,000 accounts for both unemployed people and economically inactive, which is equal to 25% of the working-age population.

place on upgrading the North Wales Main Line to improve the economy of Anglesey, help the Energy Island concept, and perhaps even link Holyhead to Hull through HS3 in the long term?

Dylan Williams: I think improving infrastructure is critical to north Wales and even outside the concept of Wylfa Newydd. It is linking north Wales. It is bang in the middle between the rest of Europe and Ireland as well, which is sometimes forgotten, and Holyhead is an international gateway to Ireland and into the UK. The infrastructure is essential. Despite there being a need to invest in east Wales, it is essential for people from east Wales travelling across to Wylfa Newydd that they can do it during the day and that they can stay at home. The travel to work area from home that Horizon is currently working to is 90 minutes, which takes you about halfway across north Wales. That is only likely to come down one way because of health and safety requirements and the fact that the working hours will be 12 hours once you get there, so I think it is critical that effective and efficient and integrated transport is put in place and that east and west Wales are better served and better linked together.

Chair: Thank you. Are there any more questions? No. Thank you very much for coming and for your answers.

Examination of Witnesses

Witnesses: **Neil Crumpton**, People Against Wylfa B, **Gerry Wolff**, Co-ordinator, Energy Fair, and **Gareth Clubb**, Director, Friends of the Earth Cymru, gave evidence.

Q166 Chair: Bore da, good morning, Mr Crumpton, Mr Wolff and Mr Clubb. Thank you for coming. Obviously, you may have a slightly different perspective from our previous speakers, but perhaps I will ask Liz Saville Roberts if she would like to start off with the questions.

[*Interruption*]

Q167 Liz Saville Roberts: Diolch, bore da. Will you please register and explain your main objections to nuclear power? To what extent do your views on nuclear weapons influence them?

Gareth Clubb: There is a link between creating energy using nuclear and nuclear weapons. That has been proven over a long time and over much territory worldwide. That is a real concern. Our main objections to nuclear energy are that nuclear waste is exceptionally dangerous and stays so for if not hundreds of thousands, millions of years. That puts it in a geological context and a context that is far longer than the existence of homo sapiens. We are dealing with something that will create exceptionally dangerous waste that will remain dangerous for a period that is impossible for us to grasp. Although the risk is perhaps low, what if the worst happened? What if something on the scale of Fukushima or Chernobyl happened in north Wales? We cannot even imagine the destruction that would cause. It would make Anglesey and a large part of north Wales into a wasteland. That would have an exceptionally serious effect on the Welsh language, the Welsh economy and the existence of Wales. However, the waste is the huge concern. Even DECC has admitted that the waste will remain on Anglesey for 160 years.

Q168 Chair: Mr Wolff?

Gerry Wolff: I missed the first question.

Chair: What were your main objections to nuclear energy?

Gerry Wolff: Okay. I have quite a long list. I will be quick.

Chair: Maybe a summary then.

Gerry Wolff: Yes. One general view opposed to nuclear power is that it is very expensive. Each one of these issues I could speak about at length.

Chair: We will come back to some of them, don't worry.

Gerry Wolff: Very expensive. There is opportunity cost. Money spent on subsidies for nuclear power is commercially damaging for renewable alternatives that are cheaper and better. Security of supply: contrary to what is often suggested, nuclear power is bad for security of supply. The reason is that when a nuclear power station fails, it often does so suddenly and for that reason you need back-up just like other sources of power, and that is called the large loss response. It is a fallacy to say that nuclear power helps security of supply. There are several techniques for ensuring security of supply with renewables.

Safety: nuclear power is undoubtedly dangerous. There have been at least four major accidents in the history of nuclear power and several near disasters. Speed of construction: nuclear power plants are notoriously slow to build. Renewables can be built very much faster. Given the urgency of the need to cut emissions, the difference in build times is important.

The nuclear cycle releases radioactive materials into the environment and there are undoubtedly risks to health. Terrorism and nuclear proliferation: nuclear plants and trains and ships carrying nuclear materials are vulnerable to attack by terrorists. Nuclear materials can be used in dirty bombs or even real nuclear bombs. The close link between nuclear power and nuclear weapons means that with nuclear power it makes it harder to control the spread of nuclear weapons. Releases of CO_2: there is peer-reviewed research that shows that the nuclear cycle releases between nine and 25 times as much CO_2 as wind power. This is roughly equivalent to the CO_2 emissions from gas-fired plants. Energy consumption: there is evidence that the nuclear cycle consumes more energy than it produces. This is likely to get worse as the richer uranium ores are worked out. There is a lot of energy used in preparing nuclear fuel from the ores.

Nuclear plants are vulnerable to the effects of heatwaves and flooding that are likely to become more frequent and more severe as a consequence of climate change. Nuclear power is an inflexible source of power. You cannot easily vary the output, and in the energy economy that we are moving into that is exactly what you need. You need plants that can produce so-called dispatchable power that produces energy when it is required. Nuclear plants produce power when we do not want it and they do not produce power when we do. They do little or nothing to help balance supply and demand on the grid.

Q169 Chair: Thank you very much for that. Mr Crumpton?

Neil Crumpton: Thank you very much. I would suggest the four main objections are security, waste, accidents in routine discharges and the additional costs over a renewably powered or CCS-powered energy system in the UK.

I do focus a bit more on security. I have given evidence to the DECC nuclear forum—I am a representative for PAWB—and I am beginning to focus more on security issues. I would suggest that if this world could power itself without the use of nuclear power I think that is the way we should go. Nuclear power generates globally about 2.4% of global energy; that is the final energy used by consumers. It is unlikely to increase significantly. Even the nuclear forecasts only suggest 4% will be supplied by nuclear power by 2050. There is plenty of renewable energy around this planet and it is coming down in price. We have a fabulous opportunity globally to just discontinue nuclear power, let the existing stations serve their time and move to renewables. That would be a major boost for global security, not least considering the rise in terrorism and potentially criminal gangs, etc.

I have often thought about the three pillars put forward for nuclear power since about 2007, those being that it is low carbon, a bearable cost to consumers and offers security—well, renewables and carbon capture and storage are low carbon. The costs, even offshore wind now is likely to be equal to or lower than nuclear power by 2025 and with shorter CfD costs, so I think we have an excellent way to move out of nuclear. There are plenty of opportunities for economic development in renewables and carbon capture and storage. The waste, particularly the waste from the new plants, is likely to increase significantly the storage on site over what we have seen historically at Wylfa. It could be half as much as stored at Sellafield now by the time the store is full if it were built by 2025 and served 60 years. I can come back to that.

In terms of the costs, as I mentioned, even solar and PV are almost certainly lower even now with shorter contracts. Even offshore wind, which is the big one in terms of delivering large amounts of UK energy, is likely to be cheaper.

Q170 Chair: You would suggest that the Government should not be offering a higher strike price to any offshore wind developers or solar PV developers than they are offering to nuclear?

Neil Crumpton: Well, bearing in mind that the contract for Wylfa B or Hinkley C is probably going to be from 2025 and from there on—

Chair: Thirty years.

Neil Crumpton: —that is the comparator with which renewables, if you are delivering renewables from that date, be it PV, onshore wind or offshore wind, that should be looked at and has not been traditionally. Certainly, the media tend to use the £140 per megawatt hour for offshore wind and compare it with £92.50 for Hinkley C.

Q171 Chair: Just briefly then, can any of you see any role at all for nuclear in the energy mix in the UK? I think I probably know the answer to that.

Neil Crumpton: No.

Q172 Dr James Davies: Bearing in mind that you do not see any future for nuclear power in the UK, do you have agreement between you as to what energy sources you think we should be concentrating on and will they be sufficient to meet our needs?

Gareth Clubb: Not only producing electricity, but storing it and saving energy are important. Nearly every country in the world views the UK with some envy because we have a plethora of energy sources that could create a basket that could fulfil all our electricity needs forever if we invested enough now and in the next 10 years. We could use the sea, offshore wind, onshore wind and solar. There is then the effect on the economy. If the billions of pounds that are supposed to be invested in Wylfa was invested on making people's houses in Wales energy efficient, that would save £250 million every year for the people of Wales and reduce the need for new stations such as Wylfa. To ensure a sufficient supply when the wind is not blowing and the sun is not shining, there is a need to invest in storing energy. That is starting to happen in countries such as Ireland. Governments that view this is as important and an important market for the future are moving quickly to ensure investment.

Q173 Liz Saville Roberts: We heard earlier that the average wage in Meirionnydd was £20,000 a year, but that it was £55,000 for those who work in Trawsfynydd. What sort of industry do you envisage coming to an area like Meirionnydd that could offer higher wages than tourism, bearing in mind that the public sector is shrinking?

Gareth Clubb: The British Government and the Welsh Government have been remiss in not ensuring opportunities in new industries such as digital industries, life sciences and so on are not based in place like Dwyfor Meirionnydd and Anglesey. James Davies asked the head of economic affairs of Anglesey council what would happen if the backbone of Anglesey's economic strategy happened? He admitted that there was no contingency plan. What sort of economic planning is that? If there is a risk that something will affect the cornerstone of the economic strategy, it is exceptionally remiss that there is no other sort of economic planning. Some things can fill the gap, but the Welsh Government must work very hard to boost and attract alternative companies.

Q174 Chair: Anyone else on this point?

Gerry Wolff: Is this alternatives to nuclear power? Is that the point?

Chair: Yes, or what the alternative would be if the new plant does not go ahead.

Gerry Wolff: Can I go through some points that I have written down?

Chair: Yes.

Gerry Wolff: There are several alternatives that have been mentioned: wind power, solar power, power from tidal lagoons, tidal streams, hydro power, geothermal power, power from biomass, and others. There are many reports showing how to decarbonise the world's economies without using nuclear power, many of these from well-respected bodies such as the National Academy of Sciences in the USA, which is the US equivalent of the Royal Society. These reports show that there is a superabundance of renewable sources of power, far more than we will ever use. There are many techniques for balancing supply and demand on the grid that can guarantee security of supplies. A demonstration of the way that renewables can provide a reliable and responsive source of electrical power is the

combined power plant, which links and controls 36 wind, solar, biomass and hydro power installations spread throughout Germany. It has proved to be just as reliable and powerful as a conventional large-scale power station.

I would like to make a comment on a couple of points that have been mentioned before, if I may. There is the question of the strike price for offshore wind and nuclear. I would like to make the point that this is not a fair comparison. Nuclear power has been subsidised for years and years and years. Offshore wind is a relatively new technology and subsidies are to bring new technologies on. They are not for old, established technologies.

Q175 Chair: Do you think the price of electricity for industry at the moment is too high or too low?

Gerry Wolff: That I do not know.

Q176 Chair: Do you think it would be better if it were cheaper or more expensive?

Gerry Wolff: It would obviously be better if it was cheaper. The point about nuclear power that is not well known is that there are many hidden subsidies.

Q177 Chair: You would agree in principle?

Gerry Wolff: They are real costs but they are hidden from view, so we are paying the costs but people are not aware of them.

Chair: You would agree in principle that we ought to try to make electricity as cheap as possible?

Gerry Wolff: Yes, but if you do your sums correctly nuclear power comes out far ahead of everything else.

Chair: We are just arguing here about costs. You are right and I think we are on the same side. We want to make it as cheap as we possibly can.

Gerry Wolff: If you factor in all the subsidies, including the hidden subsidies, nuclear power is way above everybody else.

Q178 Chair: What we have to establish here is how we make electricity as cheap as possible. We are all agreed on that?

Gerry Wolff: You do not do it with nuclear power. It is much, much more expensive than other forms.

Q179 Liz Saville Roberts: I think we have wandered from the nature of my question because we have heard quite a bit, which is very interesting and very well argued, about nuclear potential versus renewable potential.

Gerry Wolff: I was given the briefing and certain questions that I prepared—

Liz Saville Roberts: The question that I asked was more specifically to these regions of north-west Wales. If these developments go ahead—Wylfa seems more definite certainly as we stand now—they are contingent upon support from central government. These are both very poor regions and I would like to see all government—local government, Welsh

Assembly, Westminster Government—working together to develop those economies. Consider the differences in salary. There is £55,000 for the Trawsfynydd salary as opposed to £20,000 on average. In 2013, the average weekly salary in Meirionnydd was £438. In November last year it was £400. What I am looking for are suggestions about other means of developing the economy in these areas. In all fairness, local authorities with their limited and falling budgets can only do so much. We must work together.

Chair: Do you want to come in, Mr Clubb, on that? Did you want to answer that question?

Gareth Clubb: I believe that I have answered that to some extent. Of course, economic development is not my specialism. I wanted to return to your point, Mr Davies, when you said that we all agreed that we wanted to make electricity as cheap as possible. If you want to produce cheap electricity, dig and burn coal, because the pollution costs are not taken into account. To some extent, many nuclear energy costs are not counted or are hidden, as Dr Wolff said. Who knows about the existence of nuclear police? Ninety-nine per cent. of the population of Wales do not know about that. There is a host of subsidies to the nuclear industry that people do not know about.

Q180 Liz Saville Roberts: Yes, it is something that I feel is quite significant. I do not know, Neil, if perhaps you could come in on this?

Neil Crumpton: Sure. Specifically to the regional policy, it is very difficult to answer that question because you would need to compare a nuclear inclusive energy system with a non-nuclear energy system, which would comprise more renewables and more heat pumps and all those different technologies. What parts of the renewables industry, shall we say, would land in north and mid-Wales is very difficult to say and it would be very dependent on an industrial strategy and a business strategy that promoted peripheral areas. Holyhead itself is a port so could service offshore wind, certainly, in the Irish Sea. The problem that anti-nuclear campaigners have is that we cannot say specifically what would be built where because we do not know. I come from Hull and I see that jobs at Siemens could be three times as many if the nuclear power sector did not go ahead and we had more offshore wind. It just depends where the jobs may lie and where you can boost them with the proper strategy.

On the wider point, I would agree with my colleagues on all the non-nuclear energy, reducing demand and the main renewables. I would add—I have given evidence before to this Committee or a similar one a few years ago—biomass with carbon capture and storage is not necessarily promoted by most of the environmental groups, but PAWB allows me to take that forward more. If you use biomass with carbon capture and storage, you are actually going carbon negative and that is a recognised UN mitigation technology now. It is in the IPCC reports. I would argue it is strongly needed globally in order to reduce carbon dioxide emissions in the atmosphere. There should at least be a demonstration plant, and Wales and the UK are well placed to do such things.

Just on one point, you did mention whether it can produce the sufficient quantity. That is a matter that people perhaps do not focus on. I would say that I am sorry to hear that David MacKay, the late chief adviser, put on a very high final energy demand, but he was actually talking about the primary energy supply, which included all the thermal conversion efficiencies for fossil fuels. He should have aimed at a lower figure and for that lower figure, which was in the DECC calculations, you would need, in my view, a lot of

offshore wind, maybe 40% of our energy coming from offshore wind or marine sources, even with some biomass. The way I see Government policy going is that they are looking towards building maybe 20% to 40% of UK energy being dependent on nuclear power. That is imported uranium, etc. I would have a lot more offshore wind particularly, solar as well, where nuclear would fit.

Q181 Chair: Isn't one of the problems that you have—and this is an odd fact but I have noticed it—that wherever you have existing nuclear power stations the public seem to be quite in favour overall? They have all voted for political parties that are very supportive of it in this area, yet whenever you suggest a large wind farm, all the political parties, including those who pay lip service to wind farms at a national level, locally are all jumping up and down in anger and saying they do not want it. How are you going to persuade us that you are speaking for any large body of people here?

Neil Crumpton: Sure. I did mention offshore wind. I think there is a limited role for further onshore wind. If the public really were against it, and the national polls all suggest that there are 60% to 70% in favour—

Chair: Of offshore wind?

Neil Crumpton: For onshore wind.

Q182 Chair: Why then is it that in areas where it is suggested, the local MP, whoever he or she may be and whichever party they represent, always seem to take an anti view, whereas with a nuclear power station, dare I suggest it in present company, the local politicians are all wildly enthusiastic even if at a national level their party takes a different view? I will let everyone answer it. I will come to you in a minute.

Neil Crumpton: I think historically there has been a lot of opposition to onshore wind for the wrong reasons. There is a visual point, but there was always this idea that there is the power station burning just as much emissions in the background, which there is not, and the costs are higher because there are hidden subsidies.

Chair: Do you think that is why people are opposed to it?

Neil Crumpton: No, let us assume that that is now fading away. I would still think there is a residual kind of antagonism towards onshore wind in that sense and some visual aspects, but that is why I would suggest offshore wind is by far the major thing we need to look at, plus PV and all the rest of them. That is a lot more acceptable, and the public only voted back in the national debate that happened between 2007 and 2011 on the contingency that it was said at the time that nuclear is critical. It was emphasised it was critical, absolutely necessary for the UK economy, and that waste is a fraction of what it would be.

Chair: There are local councillors here as well who are supportive.

Gerry Wolff: I know this sounds like a slightly provocative thing to say, but we are pretty sure that the local politicians are misinformed because we have gathered signatures on petitions in places like Llangefni and we get the strong impression that about 70% of people are in favour of renewables and against nuclear. As Neil says—

Chair: They are voting for local councillors who are in favour.

Gerry Wolff: UK-wide surveys show consistently that people are strongly in favour of renewables. PAWB commissioned a survey that confirmed that most people in the area are strongly in favour of renewables.

Chair: But they have voted for local councillors who are strongly in favour of nuclear.

Gerry Wolff: There is no choice. All the candidates—

Chair: You could put someone up if you wanted.

Gerry Wolff: Well, I am standing as a paper candidate just so people have someone they can vote for that is anti-nuclear.

Chair: You do not sound very hopeful that you are going to get any votes.

Gerry Wolff: I probably won't, no.

Q183 Chair: Right, so your opinion polls are not really that meaningful in that case?

Gerry Wolff: No, it is not my opinion polls, it is national opinion polls by reputable polling bodies that show consistently that the majority of people favour—

Chair: I have been in this game for a long time now, 17 years, and I cannot help but think that if there was a sizeable percentage of the population who are anti-nuclear in this area, somebody somewhere would be standing and winning elections. Anyway, I will leave that as a thought.

Gareth Clubb: A series of opinion polls consistently shows about 70% of people supporting onshore and offshore wind and solar power. Perhaps groups of people who are against something can often raise their voice and come together to put pressure on politicians when others who are perhaps in favour do not feel so strongly about the issue. Nuclear power is an exception. I do not know the reasons. I do not believe that there is any hope of building Wylfa Newydd, so saying, "Yes, we'll do an opinion poll" is valueless to some extent. Not that we are wasting our time, because the discussion is important, but if Anglesey Council does not have a strategic economic plan and if the Welsh Government are not planning for a non-nuclear future on Anglesey, they are being negligent. The same applies to the British Government. They base their planning for an energy network on significant nuclear supply to the grid. If that does not happen—and we have seen what has happened with Hinkley—suddenly there is a panic. When Wylfa does not proceed, there will be panic from the council and the Welsh Government and that is not a good basis for planning.

Q184 Liz Saville Roberts: We heard from the representatives of Gwynedd Council that Wylfa Newydd and a small modular reactor in Trawsfynydd would have a positive effect on the Welsh-language culture of north Wales. Why do you disagree?

Gareth Clubb: I see no evidence to show that up to 10,000 people working on a site—it is the first time that I have heard that figure—to build somewhere before moving on to the next site will help a minority culture in a national context by learning a language in their thousands to contribute to the local culture. If you look at the population of Anglesey—about 70,000—you see that about 57% spoke Welsh in 2011. Let us say, conservatively, that 5,000 workers will come to the island and not learn Welsh, that will pull down the

percentage to 53%. That is very close to 50%. In one year, you could have a negative effect of the same size as a 30-year historical deterioration. In Anglesey, the local authority has the second highest percentage of Welsh speakers. If the building community reaches 10,000—I had heard 6,000—that will pull down the figure below 50% and Gwynedd will be the only county left with a majority of Welsh speakers.

Neil Crumpton: In terms of the SMRs in Trawsfynydd, well, even if the advanced boiling water reactor got built, the technology of SMRs is an "if" even in DECC. It is not as though these are very likely to be built. They need to be demonstrated at a commercial scale and all those things, and cost effectively. The whole point about going big with nuclear was to achieve the economies of scale. Now that that has become problematic because of the sheer size and the cost and so on, this idea of going small and producing them offsite and bringing them onsite and bolting them together is gaining ground. But it is very much a hope and not necessarily a given and that is one thing I would suggest in terms—and that unfortunately leads to a defocusing of what else you would do if you are so focused on new nuclear, and I think DECC are and certainly the Tory party are, perhaps many in Labour, too. They are so focused on new nuclear that they are missing the opportunities in the here and now with technologies that are coming forward and that can be developed now. That is an economic hit that you do not really see, so I would be concerned about SMRs in that sense. Plus their costs are predicated on industrial heat being available and I do not see much industrial heat being needed around Trawsfynydd. Gaining public support for SMRs on industrial sites around UK cities I think certainly needs to be tested because I think there would be a public backlash when there may be cheaper renewables and potential for jobs for cheaper renewables in the same location.

Chair: Okay. Well, we seem to have moved on to SMRs. Would anyone else like to ask about SMRs or reflect on the language?

Q185 Dr James Davies: You have talked about the fact that you feel SMRs are unlikely to be developed and particularly here. Why do you think that is the case? Is it entirely down to the fact that the technology is not developed enough or cost? What are the main factors?

Neil Crumpton: Certain industries and manufacturers are trying to develop a commercial-scale SMR that could be mass produced and rolled out, not necessarily British but there is some British interest there. It is very much in development phase and that could be years away. Then to get one demonstrated and built and then tested to get the accreditation and the certificates, etc., could take you to 2030. We ought to be a lot more here and now, particularly as renewables and even carbon capture and storage schemes based at Deeside feeding gas, CO_2, back into the depleted gas fields of Liverpool Bay could have been built by now. That is the problem. It is what you are missing out on. SMRs, even if they get them to work technically and so on, it is still a question of cost compared with the renewable scenario.

Gareth Clubb: A spokesperson from Westinghouse, which has been working in this field for years said, "The problem I have with SMRs is not the technology, it's not the deployment, it's that there's no customers." The problem is that it is expensive, like all nuclear energy, and no one wants to create it. If you consider the context that the cost of renewable energy is reducing, it will not work economically.

Q186 Chair: I understand the economic viewpoint, but I am not sure that you are right to take the word of the chair of Westinghouse, who is in the business of building nuclear power stations. Is there an element of competition there?

Gareth Clubb: Westinghouse invested hundreds of millions of dollars in SMRs because they got grants from the US Government to do that. After doing the work for many years, they came to conclusion that no one would buy.

Q187 Chair: If no one was going to buy them, I would not have thought that anyone would commission them.

Gareth Clubb: Therefore, there is no future for SMRs.

Q188 Chair: Thank you very much for coming and giving evidence. We have got a lot more interesting evidence.

Gareth Clubb: Let me add something. About a third of our evidence was related to the costs of the different ways of producing electricity. I would be glad if the Committee wrote to DECC and, in raising the points that I have made, ask them to reassess the matter, especially using the latest costs for every technology, and using the discount rate that the Treasury insists that every other project in Britain uses, yet DECC has decided to use a discount rate that favours nuclear energy.

Q189 Chair: What is the discount rate?

Gareth Clubb: They use 10% and the Treasury says that you should use 3%.

Q190 Chair: Well, I must admit a discount rate is something that I have tried to understand over the years, and I have not quite got there yet, but I am going to have another go at that seriously. Thank you very much.

Neil Crumpton: On your point about why politicians vote for pro nuclear, I would suggest that in the system that we have there are other issues other than nuclear. You tend to vote for the main parties even though you might disagree with them on certain aspects. Unfortunately, that is the way it has been happening. If the public and politicians knew the latest information, and it is fiercely difficult to keep up with it all, then I think the view would be much more nuanced and there would be a better debate and probably different polling and voting outcomes.

Just on the point of the nuclear connection, I think some politicians particularly do feel that we need a nuclear energy sector to support a nuclear defence sector. That includes submarines and all the rest of it. For Britain now, we do not need new nuclear power stations or infrastructure to maintain our Trident defence, if that is what the public want, so that connection should be broken. It is not mentioned in their specific reasons for developing nuclear energy, but seeing as those are crumbling by the day I do feel as though the Ministers and the establishment in London particularly do feel as though we need nuclear energy to have this nuclear kind of prestige. I do not think that is the way the UK should be going forward and leading global policy.

Q191 Chair: Does Pakistan have nuclear energy? Because it does have nuclear weapons and I am not aware that there are any nuclear energy power stations, so I am just wondering why

you make the correlation between energy and defence. It is an interesting point that I had not thought of.

Neil Crumpton: I think generally there is a correlation between nuclear energy and weapons development. That is how it started in Britain and America. What I am saying now for the UK is that I still think there is this time lag in terms of the ministerial and the whole thinking of a country in terms of do you need nuclear energy, and nuclear engineers here, there and everywhere, to support a nuclear submarine deterrent.

Q192 Liz Saville Roberts: But is that association between nuclear generation and nuclear weapons unique in the sense—not unique but related to the United Kingdom and the United States of America and is that relevant to nuclear generation as we move into the future?

Neil Crumpton: I see no connection or no requirement for new nuclear build to maintain the British nuclear deterrent should the public wish to continue with a deterrent in future decades. There is no requirement. We have the weapons grade plutonium already, masses of it, and the highly enriched uranium for the submarine reactors. You could argue that a bigger pool of nuclear engineers in the civil sector provides more potential for people to move into the military to man the submarines or whatever, but that is a tenuous connection. You can just have the specific education programmes for workers in those areas. I do not see a connection, but I think the politicians still think there is or it is good for nuclear prestige and Britain's prestige.

Q193 Chair: Okay. Thank you very much indeed.