

Business, Energy and Industrial Strategy and Welsh Affairs Committees

Oral evidence: [The Swansea Bay Tidal Lagoon](#), HC
1014

Wednesday 9 May 2018

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Members present: David T.C. Davies (Chair, Panel I); Rachel Reeves (Chair, Panel II); Tonia Antoniazzi; Chris Davies; Geraint Davies; Stephen Kerr; Albert Owen; Mark Pawsey; Antoinette Sandbach; Liz Saville Roberts.

Questions 1 - 125

Witnesses

I: Rt Hon Charles Hendry; Mark Shorrocks, Chief Executive, Tidal Lagoon Power; Richard Howard, Head of Research, Aurora Energy Research Ltd; Mike Wilkinson, Senior Conservation Planner, RSPB.

II: Martyn Evans, Head of South West Wales Operations, Natural Resources Wales; John Wheadon, Permitting Service Manager, Natural Resources Wales; Dr David Tudor, Portfolio Manager, Marine Infrastructure, The Crown Estate.



Examination of witnesses

Witnesses: Rt Hon Charles Hendry, Mark Shorrocks, Richard Howard and Mike Wilkinson.

Chair: I am David Davies, Chairman of the Welsh Affairs Select Committee. With Rachel Reeves from the Business Select Committee, we are doing an inquiry into tidal lagoons. We have about one hour for this panel, so I am going to try to get through the questions as quickly as I can. If I am gesticulating, I am not trying to be rude, but I may have to cut people off if the answers are too long. I just want to put something on record. It is important to make any relevant declarations of interest. I have been lobbied heavily by a company in my constituency, as Mark is aware, who stand to benefit from a contract if this goes ahead, so I wanted to put that on the record before I begin. Are there any other relevant declarations of interest?

Mark Pawsey: Mr Chairman, may I declare that GE Energy, which is a member of the consortium, are, at present, in my constituency?

Antoinette Sandbach: Can I declare that a director in my constituency, although his business is not based in my constituency, has approached me about Swansea Bay tidal lagoon and alleged promises of work relating to his company?

Geraint Davies: Can I just say, obviously, the tidal lagoon would be critically important to the success of Swansea, so I have an interest?

Q1 **Tonia Antoniazzi:** Good morning. Mark, you have been in discussions with the UK Government about a contract for difference for the Swansea Bay tidal lagoon project since 2015. What is the current status of these discussions?

Mark Shorrocks: I do not know. The last communication we had from BEIS was a meeting with Jesse Norman in January 2017, a week after Mr Hendry put out his review. In 2017, we updated the Department on the evidence plan process for the Cardiff project and our delivery team updated the Department in October of that year on our project delivery modularisation and the elements of that delivery. We have only had a letter from Mr Clark this year. It would be about three weeks after I wrote to Mr Clark, so that would be about 28 February, when he acknowledged the letter I had written to him. In that letter, I put forward a proposal for a joint funding package involving the Welsh Government putting substantial equity into the project alongside a contract for difference to be given to us by the British Government, and for that contract for difference to be no greater than that offered to Hinkley Point C nuclear power station, albeit we are one-66th of the subsidy, but at that level.

Q2 **Tonia Antoniazzi:** Have the Government made it clear what criteria you need to meet in order to secure this?

Mark Shorrocks: No, they have not.



Q3 **Tonia Antoniazzi:** If the Government do not think the project is attractive, should they not just say so?

Mark Shorrock: We would love to know what is going on. We would like to have a decision.

Q4 **Tonia Antoniazzi:** What has the impact of the Welsh Office been on BEIS? Do you know?

Mark Shorrock: The Welsh Office talk to us and they tell us that they are encouraging a decision, and they are very positive about the project as long as you can prove value for money. We have been in to brief the Secretary of State, Alun Cairns, on the value for money. We received a letter from the Minister, Baroness Neville-Rolfe, in September 2016. Baroness Neville-Rolfe laid out the value-for-money criteria that would be required to be met, both the National Audit Office criteria and the social NPV criteria. We have informed the Welsh Office of all of those answers—I can share them with you if you would like—but we do not know what they have then done with them, apart from saying, “Look, we are trying to get you a decision. We are pushing hard”.

Q5 **Tonia Antoniazzi:** When was the last time you met with the Secretary of State for Wales?

Mark Shorrock: In a formal situation, as opposed to something on St David’s Day, it would have been when I presented the 76-page value-for-money assessment that we carried out in accordance with National Audit Office work and Lord Stern’s advice on social NPV. That was the end of October 2016, I believe.

Q6 **Tonia Antoniazzi:** Do you know how else the Secretary of State has been involved and how else he is contributing?

Mark Shorrock: I do not know that.

Q7 **Mark Pawsey:** May I follow up on the relationship with Government and delays? Perhaps I might ask Charles Hendry to start with. Mr Hendry, you were asked to do a report and you prepared that 16 months ago. When you prepared that report, how long did you, as a former Minister, expect it would take for Government to come to some form of decision on your report?

Charles Hendry: As a Minister, I learned that things always take longer than you expect them to, and this has been no exception to that rule. This was a substantial report. It was 150 pages long. There were 75 conclusions and recommendations. Some of those were quite easy recommendations to make—quite small issues—but actually for the Government then to work out how it would implement them required quite a lot of work, so I understand why it has taken a great deal of time.

It was not just a binary decision. It was not just, “Should we do Swansea Bay tidal lagoon or should we not”. There were a number of different outcomes. It could be, “No, we should not do any tidal lagoons at all”. It could be, “We should go straight to a big one, and do a super large lagoon”. It could be, “We could go to Swansea and not do a follow up”.



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It could be, “We could do Swansea and immediately do a follow-up”, or it could be, as I recommended, “You do Swansea and then you have a pause before you do a follow-up”. There were a number of different alternatives that could have come out in the Government’s decisions.

We recognise that Ministers have changed in that time; a lot of ministerial time has been taken on Brexit; we have had a general election. Realistically, I do see progress, which is still ongoing. People ask me whether I am disappointed; I am not. Disappointment, to me, would be if the Government had said no. The Government have not said no; this is still in play and that is a good indicator.

Q8 Mark Pawsey: How much more time do you think it is reasonable to expect the Government to take to come to a decision?

Charles Hendry: I know that the discussions that are happening now with the Welsh Government indicate that we are moving towards the end game. There is a time that is necessary for the officials to talk through the proposal that is being made, to see how well that works and whether that is on terms that the UK Government are keen to accept. Those discussions are making some progress, but some extra time is required for them, I understand. We are now in the end game; it would be very hard to see why it would need to go on a great deal longer.

Q9 Mark Pawsey: Mark, may I ask you about the impact of the delays? What has that impact had on the team that you put together to deliver this project?

Mark Shorrock: Perhaps I should answer externally and then internally. Externally, we have seen three of our supply chain go into administration. We had that quite sad news about Davy Markham, a 100-year-old heavy engineering firm in Sheffield. They do good castings, good machining and so on. Our turbines are quite big: 15 metres long, 7.5 metres high and 720 tons per turbine and generator. The impact externally to us has been to see Rowecord, Davy Markham and some of these big heavy engineering firms go down, and we could have been a lifeline to them. Internally, it is a mix, really. We have had to let go a number of staff. We have held on to all of our core delivery capability, because we are awaiting a yes from Government and then we can launch the final competitive tender for the marine and civils package. It is very costly. We are a private sector business. We are owned by 440 ordinary shareholders. They have continued to support the business, to make sure we could get to a decision. It is a burn rate of some several hundred thousand pounds a month to maintain.

Q10 Mark Pawsey: Is there a concern that, if the delays continue, your team could disintegrate and that it might not be possible to realise the project if there were to be a yes?

Mark Shorrock: People are hanging in there, but they are hanging in there now.

Q11 Stephen Kerr: The RSPB and the Wildlife Trust of South and West Wales



have both expressed concerns about the environmental impact of the tidal lagoon, and environmental groups have called into question the detail surrounding that environmental impact. Local residents' groups in places that might supply materials for the lagoon have also protested about the environmental impact. In the process for granting consent for the tidal lagoon, how effectively has environmental impact been taken into account, Richard?

Richard Howard: This is not really my specialist area.

Mike Wilkinson: We have two main concerns about environmental issues around Swansea. The RSPB is supportive of the idea of doing a Swansea Bay tidal lagoon. We set off being a supporter. I cannot speak for the wider environmental NGO group. Following the granting of the development consent order, we have become a little bit more reluctant, if you like, because of the level of challenge there is around uncertainty in assessing fish impacts.

For us, there are two big issues around Swansea Bay. One is about how much impact on fish it will actually have, how much uncertainty there is and how long it will take to resolve the uncertainty around marine licensing. We are concerned that some assessments that Natural Resources Wales has done are markedly different to those published at the time of the development consent order. The second point relates to Charles Hendry's reviews around using it as a test bed, to learn from Swansea. We have seen very little evidence about maximising the environmental consenting process and the monitoring process in order to learn lessons about the acceptability of the technology.

Mark Shorrock: I have two quick points. The marine licence is reaching its conclusion. Because the British Government have not offered us a CFD, we have been given an inordinate time to carry on doing fish. We have done two extra years of looking at approaches and agreeing approaches. I can report to the Committee that the experts used by Natural Resources Wales, Cefas, the government agency of Defra and our own experts have reached a point in the modelling where 85% of all parameters are agreed and the impacts are coming out extraordinarily low—negligible impacts on fish. It is now going to the permitting service for their determination.

Charles Hendry: May I come in briefly on that? In the RSPB's evidence to the review—which was not fundamentally about the environmental issues; it was about the economics of it, most importantly—one of the bits of evidence they gave was that, in an ideal world, a pilot tidal lagoon would be constructed and then comprehensively monitored and results shared, such that all parties had a comprehensive understanding of the economic, social and environmental costs and benefits of the new technology. I put that recommendation in my report, so I did absolutely pick up on what I thought was one of the most important requests that they had, which was that there should be a pilot and it should be analysed for a reasonable period of time before going ahead with the wider programme.



Mike Wilkinson: If I can come back on that, we were very pleased to see that recommendation. It creates certain challenges, because the permitting and consenting process is not really designed to, if you like, develop an experiment or develop a trial to explore whether or not something is scalable. The permitting process is about whether or not monitoring is required to prove the conditions of the permit or the planning permission. If we want to maximise the opportunities to learn from the Swansea Bay lagoon, if it were to proceed, we think more consideration needs to be given to how you would fund monitoring over and above what would normally be required and how you would maximise the opportunities to learn whether or not this technology is scalable and whether or not it can be replicated.

We also think it is important to think about a meaningful pause for learning in terms of what makes sense ecologically, because obviously you need time to see what happens in terms of ecological responses. One of the things that we are bit concerned about is the assumption that it is a pathfinder and everything then proceeds. It may not be a pathfinder; it may be a dead end.

Q12 **Liz Saville Roberts:** Mr Wilkinson, I have a quote from you back in September 2017: “The RSPB considers that Swansea Bay tidal lagoon project should go ahead, but only with robust scientific monitoring of its impact on the natural environment, and only if a marine licence is possible without compromising how we implement the Habitats and Water Framework Directives”. Given that we have had this information from Mr Shorrocks that 85% of the impact on the parameters, as I understood, are extraordinarily low—although I understand that this is an ongoing procedure, and there is a touch of me that is concerned that there is always a “what if” question that can be moved on if one is so minded—what do you now feel that the TLP could do in terms of commitments that could actually make you happy for this project to go ahead as we stand now?

Mike Wilkinson: I think the jury is out in terms of the fish evaluation, because we have not seen the results of the assessment of Natural Resources Wales. Everything that Mark has described is not visible to us. In terms of transparency, we would like to see the end of that process and, if it confirms the original assessments, then we are likely to be happy. What we would be concerned about is if it showed a much higher level of challenge than was originally thought. The issue for us would be about whether a Swansea Bay lagoon would challenge the way we implement directives. If it does not, then we are satisfied on that point. The point then really is about how Government, the TLP and other interested parties can identify how to maximise the value of Swansea Bay tidal lagoon to learn lessons for the future.

Q13 **Liz Saville Roberts:** It would prompt a question. We are in an environment where there seems to be continuous postponing of decisions. What would be the specific things that need to be done to reach that point, because otherwise it will just roll ahead as being, “This



could be done, this could be done, and this could be done”? We have to be in a position where we could actually maximise what we can learn from the situation as a pilot.

I wonder whether it also prompts another question. Obviously, we will need a marine licence and we will obviously need the Crown Estate lease before building can commence, but why should that in itself be stopping the UK Government deciding whether or not to award a contract for difference and issuing a response in relation to the Hendry review? All these things are sort of being put up as reasons not to move ahead.

Mike Wilkinson: I am not suggesting it is not a reason to move ahead. I am suggesting that the issue of whether or not the technology is scalable is probably what needs to be thought about. The RSPB’s view has always been that a tidal lagoon industry would be high-risk for wildlife. The evidence that we have seen and the evidence that is out there in the public domain, including DECC’s Severn tidal power feasibility study, indicated that compensation and compliance with environmental legislation for barrages, and for tidal lagoons, would be challenging. The Welsh Government’s recent assessment of their own marine plan came to the same conclusion: that compensating for larger-scale tidal lagoons would be challenging.

Swansea is ideal as a pilot in some ways because it is tucked away in a less sensitive part of the estuary; it does not create any big bird problems for the RSPB; it may or may not create a big fish problem. It is a good place to study the effects. Moving development into the very highly protected upper Severn estuary, which carries multiple designations, is internationally important for its bird life and its marine habitats, is much more challenging. We have seen no convincing evidence so far that large-scale development could be delivered in a way that is compliant with environmental legislation. That is why I mentioned earlier that it does raise this question about whether this is a technology that can be scaled up and meet environmental requirements.

The Hendry review did not address those environmental issues. In a sense, perhaps, the missing part of this whole question is about the extent to which Government and their partners are exploring the environmental implications of trying to deliver a tidal lagoon industry. We had some discussions with TLP and we meet regularly but, from an RSPB perspective, it still looks challenging.

Mark Shorrocks: We have adopted an evidence plan process. That means a peer review group has been formed, which the RSPB is part of on its specific specialist topic areas; this is for the Cardiff tidal lagoon. We put a scoping in, in March 2015, to the Planning Inspectorate. It was agreed what surveys, approaches and methodologies were needed. It is then going to be agreed how you measure impacts, what impacts are bad and what impacts are fine, and, should you have impacts, any effects and then how you mitigate. I can report that over 62 technical papers have been submitted to six working groups—coastal processes, fish, ecology, habitats regulation and so forth—and we feel that there is a very robust



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environmental assessment being produced. We are now three years into it.

Chair: Okay, thank you. We come now to Antoinette Sandbach. Perhaps as Mr Howard has not spoken yet, you might want to go to him first.

Q14 **Antoinette Sandbach:** Mr Howard, how far off a compelling proposition for the Government are the current proposals for Swansea Bay tidal lagoon? Do you think it is value for money for the taxpayer?

Richard Howard: That is a great question. The starting point would be to think about what the proposition actually is. I think Mr Shorrocks said the number is comparable with Hinkley Point, which implies a number of around £90 per megawatt hour. I am not actually clear on what the details of that proposition are.

Q15 **Chair:** Let us ask: is it the case that you can do it for the £92.50 per megawatt hour that Hinkley are offering?

Antoinette Sandbach: For 35 years.

Mark Shorrocks: It is correct that we can do it for the subsidy equivalent. What has been recommended by Mr Hendry is a 60-year descending rather than a 35-year ascending.

Q16 **Chair:** I am not sure what that means. Can you match Hinkley?

Mark Shorrocks: Yes.

Chair: You can absolutely match Hinkley.

Mark Shorrocks: Yes.

Richard Howard: What is the term of the CFD?

Mark Shorrocks: Going back to Ms Antoniazzi's question, at the moment we have put forward a proposal, Richard, and we have not had feedback on it.

Richard Howard: What was it?

Mark Shorrocks: We had two in: a 35-year ascending and 60-year descending. Clearly, Mr Hendry recommends a 60-year descending, and that can dramatically reduce the subsidy burden because you stretch out the repayment profile. It is how you should do the big lagoons.

Richard Howard: Yes. Presumably those that have a different strike price depending on the structure of the deal and the terms of the—

Mark Shorrocks: The Welsh Government—and it is for Ministers to talk about—

Chair: I am slightly losing control here now. It is a key question.

Q17 **Antoinette Sandbach:** Are you saying, Mr Howard, that there has not been sufficient transparency from the tidal lagoon project?

Richard Howard: This was the point I was trying to make, by trying to get some details out. There are no details in the public domain. This is



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the first time I have heard these details. You can look back at reports. For example, there is a 2014 report that talks about a £168 per megawatt hour strike price being needed. That is a document that we can go and read. These details have not emerged. Even if it was £90, the other point I would make is about what we should compare this to? I am not convinced that Government would agree to a second Hinkley-style deal at £90. We have also seen the cost of offshore wind as a comparator technology fall substantially in the last couple of years.

Q18 Antoinette Sandbach: Can I just ask Charles Hendry: are you convinced that no one else could offer a project offering cheaper electricity from other forms of tidal lagoons?

Charles Hendry: I am sure that we can see other cheaper technology routes come through.

Q19 Antoinette Sandbach: If that is right, would you agree that perhaps there should be competition from Government, and that it should be open, to allow the potential for other streams to bid?

Charles Hendry: For a pilot or a pathfinder project, no, because so much work has been done. There is one clear case that should be used, and therefore Government should seek to negotiate a bilateral tariff for that.

Q20 Antoinette Sandbach: That is even though the cost of it is greater than Hinkley Point, and Hinkley Point strike price includes the decommissioning costs of the nuclear power and is widely seen by the taxpayer as not being value for money.

Charles Hendry: Yes, and let us also understand that all of us interpret cost by what it means for us on our bills, and the cost of Swansea is absolutely miniscule: it is a pint of milk a year for 30 years; it is 30p a year. That is what it costs each household for a project like this to go ahead. It is through having a pathfinder you then get to the larger-scale projects where you can truly bring the costs down.

Q21 Antoinette Sandbach: Mr Shorrocks, I understand that Good Energy have invested in the project. What percentage of the total finished project would be owned by Good Energy and how much of the electricity generated would Good Energy have the right to purchase? Would it be at cost price or strike price?

Mark Shorrocks: The latter question is easier to do. I cannot do the maths in my head on the first one. They invested £500,000. A total quantum of shareholder capital was put in of about £25 million, so that is the percentage they own of the company.

Q22 Chair: £25 million is what percentage of the company?

Mark Shorrocks: £25 million is the amount subscribed by shareholders to fund the planning application of Swansea Bay tidal lagoon. Of that £25 million, £500,000 was provided in share capital bought by Good Energy, and Good Energy negotiated 10% at market prices of the offtake of



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Swansea Bay tidal lagoon as the quid pro quo for making a very early investment in 2013-14.

Q23 Antoinette Sandbach: In terms of your investment in the Dean Quarry, it appears that it is assumed that the Dean Quarry investment will lead to the company you control supplying the rock to Swansea Bay tidal lagoon. Do you feel that there is a conflict of interest there, and that you personally would stand to gain a lot of money from this project in terms of your quarrying interests as well as your director interests on Swansea Bay tidal lagoon?

Mark Shorrock: The clear answer is the Dean Quarry will be owned by an environmental foundation. Dean Quarry is a separate company. It is going to be owned by an environmental foundation and it will have the right to bid to tenderers of Swansea Bay tidal lagoon for the rock. It was bought as a strategic idea because the big dredging fraternity said, "You do not want to be hidebound to large quarries in Norway for such a large quantity of rock". For better or for worse, Ms Sandbach, I bought a quarry; I am not in the quarrying business.

Q24 Antoinette Sandbach: I am asking whether you accept that you have a potential conflict of interest.

Mark Shorrock: We have tried to do away with the conflict of interest by putting it in an environmental foundation.

Q25 Antoinette Sandbach: So you accept that you do have, at the moment, a conflict of interest.

Mark Shorrock: You have to do away with it by making the tenderers make a decision.

Q26 Antoinette Sandbach: Do you accept that the environmental impact of that quarry has substantial impacts, which have not been included in the assessments?

Mark Shorrock: No, that is absolutely incorrect. That would be incorrect because it has planning permission until 2035.

Q27 Mark Pawsey: On the economics of it, how does the project fit with the Government's Industrial Strategy, which seeks to rebalance the economy by stimulating development outside of the south-east? In particular, the chapter on infrastructure, page 131, says that too narrow an assessment of costs and benefits can preclude important opportunities. Is the big opportunity here not that this is a pathfinder, it could be developed elsewhere in the UK and as an exportable technology? Should we not have regard to the Industrial Strategy when we form a view on this? Perhaps Mr Howard might like to reply.

Richard Howard: That is an interesting point. The Industrial Strategy also talks about having the cheapest possible energy. You need to think about both sides of that debate and think about whether this is the cheapest possible way of generating low-carbon electricity. On that point, there are alternatives. We have seen, as I said earlier, the cost of offshore wind technology come down dramatically within the time that



the tidal lagoon project has been worked up. We have other mature technologies in onshore wind and solar that are approaching subsidy-free deployment. Should we be actually committing consumers' money to this project when cheaper low carbon options are available? That is also part of the Industrial Strategy, as I see it.

Q28 Mark Pawsey: Mr Hendry, you would argue that this fits with the Industrial Strategy.

Charles Hendry: I think it fits very well with that. The Government's policy towards energy is not just about affordability. It is also about security of supply, and lagoons are very good in that regard. It is about decarbonisation, and they are very good in that regard. It is about affordability and it is about the wider economic benefits. If you look at what has happened in the offshore wind sector, then you should be looking at where this can happen next. Tidal lagoons are a very good example of where we can see dramatic reductions in costs and where we can see a significant supply chain and some export opportunities.

Mark Shorrock: The economics of the Cardiff tidal lagoon are phenomenal, so Richard would like them from his position of, "Let us have competition with offshore wind". We can beat offshore wind with the Cardiff tidal lagoon. That is 3,000 megawatts. What is critical, I think, in terms of the supply chain, is a £2 billion order on Cardiff for turbines and generators. It is a £2.5 billion order for modular turbine housings. You replicate those numbers in Colwyn Bay, so you have an Olympic Games, effectively, for south Wales and one for north Wales. It is a supply chain that starts with Tees Components in Teeside. It comes down through Bonds Heavy Castings. It goes through Sheffield Forgemasters. It comes, as you well know, to Rugby and General Electric and runs along south Wales—Chepstow—through to Leadworth Engineering in Pembroke Dock. It is an incredibly important Industrial Strategy story. I have to say, when I read it, I thought, "Brilliant, we accord to nine and a half of the 10 pillars in that document".

Mike Wilkinson: I just wanted to add that, in terms of pathways to decarbonisation, because the RSPB is very pro renewable energy, one of the questions for the Industrial Strategy is about what the best decarbonisation pathways are. For the RSPB, they are in terms of what the lowest cost is, but also what the lowest environmental impact is. The RSPB's research around different energy pathways to meet the 2015 vision concluded that there are lower impact alternatives in the form of onshore renewables and an expansion of marine offshore. We concluded that they would be of lower cost.

Q29 Geraint Davies: Mr Hendry, we have mentioned value for money. In Swansea, the two big issues, as we approach Brexit and therefore the loss of convergence funding, were going to be electrification and the tidal lagoon. The promise on electrification has been broken. As it happens, we have seen Virgin move 800 jobs out—450 to Manchester—because of HS2, and now we are backing off the lagoon. Would you accept that value for money should be seen on the wider scale of the overall impact



on taxpayers versus benefit recipients and the confidence it brings to inward investment in a place like the Swansea Bay city region?

Charles Hendry: That is a very fair point to make. If you look at what this means for Swansea, I have never been to any community where one single power plant would be seen as such a significant driver of economic prosperity. It would bring a raft of new jobs, not just in the energy sector; it would bring you tourism. It would have a transformative impact potentially. I know that is not a reason for doing it on its own. It still has to stack up for other reasons, but I do think it needs to be understood that this is being seen in Swansea as something that is uniquely beneficial. For those reasons, I feel that that actually is a strong public driver for it going ahead.

Q30 **Chair:** Can I just bring in Mr Howard, quickly, on that, Mr Davies?

Richard Howard: I get all those arguments. There are tourism benefits; there are recreational benefits; there are flood protection benefits. The question is whether we should be putting the cost of the scheme, which delivers that mix of things, on energy consumers. There is no consumer representation on this panel, which is possibly an omission. I think you should talk more to people who represent consumers, such as Citizens Advice. They wrote a letter to the Hendry commission and said that they thought energy consumers should not pay for recreational and tourism benefits.

Q31 **Geraint Davies:** The point I am trying to make is that Swansea and west Wales is the poorest part of Europe. We are losing our convergence funding and what we are asking for is investment in the lagoon. I understand from Mr Shorrocks it would be one-66th of the cost of Hinkley. Can I ask you, Mr Hendry, again, whether you would agree with the assessment of *The Economist*, which is, basically, that it is a very small price to pay to enter a global market place with new technology that could generate economies of scale and big benefits across Britain apart from the marginal cost of entry in Swansea?

Charles Hendry: The term I used in my review was it is a "no regret" policy. It is something where nobody will turn round in years to come and say that we should not have done that. There are numerous examples around the country of plants that were built, which we rely on many, many decades later, which is fundamentally important to our energy security today. You can look at Dinorwig in north Wales; you can look at Cruachan in Scotland. There are examples of projects that were built not just because they made economic sense but actually because they were for the long-term good of the country.

What we have not focused on at all here is that this is a project for 120 or 150 years. The wind turbines will have gone in 30 and will need to be replaced, and the nuclear power stations in 60 or 70. This is potentially twice as long as a nuclear power station and, for the second half of its life, is delivering almost free electricity at almost no wider cost.

Q32 **Geraint Davies:** Can I ask one thing finally? As you will know, Mr.



Hendry, 80% of fossil fuel we know about cannot be exploited if we are going to avoid irreversible climate change and deliver the Paris climate agreement. Therefore, would you agree with me that that means the price of the amount of oil we are allowed to use will go up and this sort of tidal energy will become more and more cost-effective in terms of unit cost for electric?

Charles Hendry: It is a brave person who predicts where the price of oil will go, but I think the advantage of a project like this is that you know exactly what the power is going to cost and you know exactly when it is going to be delivered for all time, so it has an absolute clarity and certainty. That is something that is significant for consumers as well. We do not know: the price of gas could double next year, and then we will all pay more for our power.

Q33 **Geraint Davies:** Can I ask Mr Shorrock just to comment on the question I asked about the poverty and need in Swansea, the wider economic benefits and the long-term climatic impact on price?

Mark Shorrock: I really celebrate offshore wind getting down to £57. It is brilliant. What we failed to do as a country in offshore wind was to invest very early on in all the supply chain, so the blades, towers and the sails are all ours. As you know, we proposed, from the get-go, a turbine manufacturing plant in Swansea. We proposed a modular construction yard in Port Talbot. We proposed a heavy fabrication base in Pembroke and then to replicate that in north Wales in the Port of Mostyn. That is where we see the economic engine coming from. You use Swansea to get the bedrock in place and then, because we have this great tidal range around Wales, we scale up from there, but we have kept the industry. We are 84 pence in the pound in the spend on Swansea Bay tidal lagoon. That compares with about 43p in the best offshore wind farm and about 30p in the best nuke.

Richard Howard: I have two quick points; I will try to make them as quick as possible. On the export opportunity, I do not think we should overly excited about this. In Mr Hendry's own review, he said there is potential for tidal lagoons around the world, but the exportable part of the value for the UK would mainly be around design and engineering. That is not to put that down, but let us not assume that UK companies will be building these things around the world.

Secondly, on the point about fuel poverty, you make the point about south Wales being a poorer part of the country. It is the same people, the same consumers, in south Wales who will be paying for the projects, who have already seen energy policy costs rise over time.

Geraint Davies: They will have the jobs.

Richard Howard: You have to look at both sides of that coin. There are costs and there are benefits.

Q34 **Tonia Antoniazzi:** Mr Howard, you talk about the consumers. FSB Wales have supported the proposals for the Swansea Bay tidal lagoon.



Locally, this has received enthusiastic support from their members and from other businesses within the region. Are you aware of any other infrastructure project that has this level of support from the community? It is obviously what people want.

Richard Howard: I can understand that there will be huge support from local businesses. Generally, there are huge levels of public support for renewables. I go back to the letter, which I suggest you all read, from Citizens Advice about this project, which they sent to the Hendry Review. They question the value for money and whether energy consumers should be fitting the bill for the project. Do read the letter; that is the best take I have found on the general GB consumer perspective on this.

Q35 **Tonia Antoniazzi:** It is the price of bottle of milk.

Richard Howard: If you scale that up, it is tens of millions of pounds a year. If you actually go through the maths, think how many households and think how many years.

Tonia Antoniazzi: I can tell you, Mr Howard, that there is so much disappointment in Wales at this moment, in Swansea. For the price of milk, people will want it. We do want it, and we must move forward.

Q36 **Chair:** Mr Shorrocks, if this goes ahead, you would generate 500,000 megawatts of electricity. You have confirmed that you will be doing this at the same rate as Hinckley, which is £92.50 per megawatt hour. Am I right that you have confirmed that?

Mark Shorrocks: Yes.

Q37 **Chair:** Your revenue will be approximately £50 million a year. Is it realistic for you to be able to service the debt and pay a dividend on a construction project worth £1.3 billion with £50 million of revenue each year? Are you confident you can do that?

Mark Shorrocks: Yes, it is realistic. One of the really interesting things about tidal lagoons is that the financing world sees water-industry type assets as robust assets, such as the super-sewer under London. Once you build the lagoon—you build it with only 150 basis points worth of cost on the bank debt—you then put everything into a public bond. At the moment, the yields for water-utility assets are 0% plus CPI. So, yes, it is.

Q38 **Chair:** How much of that £50 million a year do you see going in wages, maintenance costs and other ongoing costs?

Mark Shorrocks: Operation and maintenance—that includes everything, including the Crown Estate lease—is £16.5 million per year.

Q39 **Chair:** That leaves you with £34 million to service the debt.

Mark Shorrocks: That leaves us with £34 million to service the debt. That is right.

Q40 **Chair:** I have to put one thing to you. Some campaigners in Cornwall have suggested that, in order to get planning permission through, you



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encouraged a parish council to accept a financial inducement in order to support the planning application right the way through. Is there any truth in that allegation?

Mark Shorrock: If you are talking about the quarry in Cornwall, it has full planning permission.

Q41 **Chair:** Is there any truth in the allegation that your company offered a financial inducement to the parish council?

Mark Shorrock: No.

Chair: That is great. We can put that to bed. You are on the record now as having said no to that.

Mark Shorrock: I have just said no.

Q42 **Chair:** The Hinckley project will generate about 26 terawatt hours of electricity and it will come at a cost of about £20 billion. Your project will generate about 500 megawatt hours of electricity every year. In other words, Hinckley will generate about 52 times the amount of electricity for about 13 times the cost. Given that, how are you so certain you can match the strike price rate?

Mark Shorrock: I want to make two comparisons, if I may. First, we have to make an appropriate comparison. We keep on being asked to compare with a 60-year-old technology when we are a pathfinder. The job of the pathfinder is to prove every component part so that we can move to Cardiff. Cardiff is 3,000 megawatts and Hinckley is 3,200 megawatts. The stat on Cardiff is fascinating. We need 88 times less subsidy for a power station that produces just above a third of what Hinckley produces. That is the best comparison I can give you of nuclear and tidal power.

If we think about the country and the system, we have very few imbalancing costs. As soon as you can put a big lagoon in the north, in the Liverpool Bay area, which is a three-hour time shift of tides from the south, we can then have continual generation with a pairing of lagoons in the north and the south.

Q43 **Chair:** What happens if the construction costs go up during the construction phase? Who is liable for that?

Mark Shorrock: The equity sponsors will be liable for that. There is no risk to Government.

Q44 **Chair:** It is going to be an absolutely legal and watertight bond of some sort, is it? If the costs double, they will have to complete the project.

Mark Shorrock: This is the nature of equity risk. This is a very tried and tested method of construction. It has been done many, many times before. We are talking about building a sand-core breakwater. We are basically talking about putting a big building on its side in the sea with highly replicable draft tubes. The project is ready to be delivered. The contractors are prepared to offer lump-sum contracts. Over and above that, Chair, there is £100 million of contingency. It is very, very



deliverable and there will not be an overage. Were there to be one, equity would pick up the risk. That is why equity investment makes a return on it.

Charles Hendry: Chair, can I just come in on your previous question as well? At the time of offshore wind being developed, people were saying exactly the same thing: "This is a very expensive technology. Why are we bothering to do this when we can have much cheaper nuclear?"

This is an argument that fights absolutely against innovation. If we want to get innovation and new technologies and we want to harness our own resources, we have to accept that in the early stages the pilot projects and the pathfinders will be more expensive. That is the way in which you bring the price down. In 10 years, we have moved from a non-existent offshore wind industry to one where the UK is the undisputed global leader in what is increasingly a global industry.

We should be looking at where we can do that next. It seems to me that there are very few areas like this. Perhaps next-generation nuclear might be one; carbon capture might be one; tidal lagoons is certainly one.

Q45 **Chair:** Mr Shorrocks, if the Government go ahead and agree the strike price you want, will the project be taken over by a different company or will it be the existing Swansea Bay Tidal Lagoon Power company that takes the whole project forward?

Mark Shorrocks: It will be the existing Swansea Bay Tidal Lagoon Power company that takes it forward.

Q46 **Albert Owen:** Can I return to the Hendry review and ask Charles a few questions? First, let me echo what you have just said with regards to the need for subsidy for new technologies and firsts of their kind. I would ask Mr Howard, first, whether you agree with that. As someone who was in the House alongside Mr Hendry when we were discussing, debating and taking criticism for the high subsidy that was provided to offshore wind and onshore wind, do you acknowledge that to move forward to the new technologies that we need and a rich energy mix we are going to need higher subsidies for pathfinders?

Richard Howard: There can be a case for that, but this is a very large experiment.

Q47 **Albert Owen:** Can you give me an example of one technology in the United Kingdom that was developed without subsidy?

Richard Howard: Many technologies outside the energy sector are developed—

Albert Owen: We are talking about energy here

Richard Howard: We are actually in a situation where energy is very controlled by Government.

Q48 **Albert Owen:** With respect, that is not my question. I am specifically talking about your remarks about wind coming down. I support the subsidy through renewables obligation certificates when they were quite



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high, because we knew the next stage would be cheaper, and that is what is coming. Do you accept that that is needed for new technologies?

Richard Howard: There is often a “Valley of Death” between university-level research and fully commercialising projects. There can be a role for Government to invest at that stage, but making a £1.3 billion investment seems like a very large one.

Q49 **Albert Owen:** Do you know how much has been invested in offshore wind?

Richard Howard: A very large sum as well.

Albert Owen: That is my point.

Richard Howard: That is true, but one of the factors that caused offshore wind costs to fall so sharply was the introduction of competition within the sector.

Albert Owen: As well as subsidies. “Subsidies” is not a dirty word.

Richard Howard: No, it is not a dirty word.

Q50 **Albert Owen:** Every energy technology has had subsidies, including gas and oil, which had 100% at one time when they were owned by the Government. That is my point.

I do need to move to the Hendry review and what Mr Pawsey had asked you about the recommendations. You made a number of recommendations; I think it was 75. There is probably a bit of mix and match there, but the specific one was about the Swansea Lagoon pathfinder. Do you stand by the findings of that review? How does that impact on the possible development of others around the country, which could perhaps be decoupled from the one pathfinder? For instance, Mr Shorrocks mentioned the north Wales Olympics with the Colwyn Bay investment. Can those go ahead? Has your focus of attention been on one and maybe the Government are not looking at others?

Charles Hendry: I stand by everything that was in the Hendry Review. I read it again in preparation for coming here, and I felt that it had actually stood up to the scrutiny that has happened since. Indeed, if anything, I feel more strongly about it now than I did at the time.

In terms of how you might phase that, I suggested that there should be a pause after the pathfinder so full lessons can be learnt. I also suggested that there should be a tidal power authority, which would then synchronise the order in which they should happen. I was not just concerned by the environmental issues in the Severn, which I am; I am also concerned about the impact on other river users. If you are taking too much water out of the river, at some point you will have an impact on the Port of Bristol, for example. I want to ensure that we avoid some of those unexpected knock-on consequences.

At the time of that pause, there is no reason why smaller projects, which are not going to have very significant potential impacts, should not go ahead in that time. Some of the projects that I did see in north Wales



and the north-west of England—in the Wyre, for example—are fairly well advanced and could move forward in quite a short space of time.

- Q51 **Albert Owen:** You mentioned that the Government had had other things to concentrate on, i.e. Brexit and a general election of its own making, which probably took their eye off the ball. We also had a new Prime Minister in that time. My serious question to you is this: surely you are disappointed with the Government after producing such a good piece of work. It took you a long time and you have not had a response. Can I push you further? Have you had dialogue with Government Ministers and officials on the development of your review and your recommendations?

Charles Hendry: I genuinely would define “disappointment” as being if the Government said no. For as long as it is in play, for as long as it is being seriously considered, that continues to put us on the right side of this debate.

I have had limited engagement. When I published the report, I took the view that it was right for me to stand back. People knew what my views were; if anybody wanted any clarity or clarification, I would be available to do so. I have not sought to have meetings with Ministers to try to advocate it further. I felt it was then right for other interest groups—be they commercial, environmental or consumer groups—to have their voices heard. I did have a meeting with the Secretary of State to talk about general energy issues, of which this was one, a few weeks ago. That is the first meeting I have had with him in that time.

- Q52 **Albert Owen:** In your review, you mentioned the importance of the project to the Welsh economy in terms of jobs and to the region. Have you had discussions with the Welsh Government or even local government in the south Wales area about what you meant by that and how it could be realised?

Charles Hendry: At the time of the review, yes, certainly, there was significant contact with Mr Skates and Ms Griffiths in the Welsh Cabinet. That was positive, but otherwise there has not been any contact since. There has been a little bit of contact with Swansea Council subsequently, but it has been quite limited.

- Q53 **Albert Owen:** You are free of being in this place now, so I am sure you will answer this honestly and openly, not as a politician, as you did when you used to give evidence to the ECC Select Committee. I am being serious here when I say this.

Are you disappointed—I am going to use that word again—with some of the responses you have heard from Ministers to questions from Members of Parliament when we have raised this issue about the delays? In response to one of my questions, the Secretary of State said, “There is good, positive dialogue with Welsh Government”. If that dialogue is going ahead, what do you think the blockage? Are you disappointed with some of their responses?



Charles Hendry: I am very disappointed, actually, that you thought that even when I was a Minister I did not give you direct, clear and honest answers, but I will obviously continue to try to do so.

We have a lot of issues that need to be addressed. The discussions with the Welsh Government are one part of that, but there were 75 conclusions and recommendations. A number of those do require a significant amount of government work to decide, if they are going to say yes, how they should be taken forward. It is not enough just to say, "Yes".

Q54 **Rachel Reeves:** Mark Shorrock, can I just come back to the issue of costs? In initial documents released by TLP and the consultants, Pöyry, you described a strike price of £168 per megawatt hour over 35 years. In that paper, there was also a subsequent suggestion that support could instead be drawn out for 90 years, presumably with a lower strike price. What you have suggested today, in answer to the Chair's question, is that, since then, you think you would be able to do it at a lower price, i.e. one that is comparable with Hinckley. Are the original costings that I have just given you the correct ones? Are they are ones you stand by now, or are the correct ones the different ones that you perhaps indicated to the Chair?

Mark Shorrock: The cost of building the project and the power output have remained completely the same numbers for the last four years. Where there was quite a discrepancy between the old DECC and the Infrastructure UK team at the Treasury was that DECC wanted everything to be in a 35-year, fully inflation-linked contract, as per Hinckley, if you will.

The Infrastructure UK team at the Treasury said, "You are in a straitjacket. You are a piece of infrastructure and you look like a water-industry asset like the Thames Tideway Tunnel. We would like to structure you differently. We would like you to have a subsidy that is not linked to inflation, or only a little bit linked to inflation, and give you a much longer contract. We can halve your subsidy if we give you a longer contract where it decreases every year, and then you pay us a cheque". The structure that was worked up with Infrastructure UK officials at the Treasury was very different. We started at a slightly higher strike price, £120, but it went down every year, crossed over Hinckley at year 20, and in year 40 the project started paying cheques back to the consumer. In the Treasury, they said, "You have efficient financing if you have a long-dated asset. You should use efficient financing for a long-dated asset".

Can I just fast-forward to today? The Welsh Government have then had a big impact on numbers and it is quite a game-changer, because the Welsh Government's ability to put low-cost equity into the project then gives you a transformative effect, because you have less private-sector, higher-cost equity in it.

Q55 **Rachel Reeves** The original numbers were £168 per megawatt hour over



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35 years. If the project was structured in the same way as Hinckley over 35 years, would it be £168 per megawatt hour?

Mark Shorrock: No, not any longer.

Q56 **Rachel Reeves** What would it be, then, Mr Shorrock?

Mark Shorrock: You will have to ask the Welsh Government Ministers what they are prepared to do on this project. I cannot answer for them, and they are—

Q57 **Rachel Reeves:** But that is an additional subsidy over the subsidy you are looking for in terms of an agreement on the strike price.

Mark Shorrock: I would not see it like that. The Welsh Government see an enormous opportunity for Wales to have a global sector.

Q58 **Rachel Reeves:** For those reasons they are happy to give you a subsidy.

Mark Shorrock: It is a commercial equity investment; it is not a subsidy. It is fully repaid. They get fully repaid; it is repaid over a longer duration.

Q59 **Rachel Reeves:** It is a rate that you would not be able to borrow at.

Mark Shorrock: Welsh Government Ministers need to answer the question.

Q60 **Rachel Reeves:** If you were not able to get the money from the Welsh Government, Mr Shorrock, would it be £168 per megawatt hour over 35 years?

Mark Shorrock: No, it would be £92.50 CFD equivalent in a 60-year descending project structure.

Q61 **Rachel Reeves:** No, that is not the question I asked, Mr Shorrock. I asked whether it was over a 35-year duration.

Mark Shorrock: If you are going to force me into a 35-year straitjacket—

Rachel Reeves: I am just asking. That is my question, Mr Shorrock. Maybe you could answer it.

Mark Shorrock: Are you asking about with the Welsh Government involved or not involved?

Rachel Reeves: I mean without the Welsh Government's involvement.

Mark Shorrock: It would be about £150.

Q62 **Rachel Reeves:** It would be £150 per megawatt hour. Thank you. If it is over 90 years—is that what you are proposing now or is that what Treasury—

Mark Shorrock: Mr Hendry recommended 60 years, so the structure that has been worked up with the Welsh Government is a 60-year descending structure.

Q63 **Rachel Reeves:** Without money from the Welsh Government, over a



60-year framework, what strike price would you need?

Mark Shorrock: It would be £92.70.

Q64 **Rachel Reeves:** Mr Howard, is there a case for the Government making a decision on Swansea Bay, which is intended to be a pathfinder project, on a different basis from decisions on developed technologies? Do you just need to choose the lowest price, whether it is an advanced technology or a new technology? Do you see any difference?

Richard Howard: As Mr Shorrock said, there is an efficient finance structure, which may push you towards a different CFD structure. We do need to have clarity on how to compare these things. It becomes a game of comparing—

Rachel Reeves I am asking you in principle, Mr Howard.

Richard Howard: In principle, there may be a more efficient way; a longer CFD duration may be—

Q65 **Rachel Reeves:** It was not about the duration. I am sorry. I am just asking whether, for a pathfinder project, you should have different rules than for, say, offshore wind, which is a developed technology, or nuclear.

Richard Howard: In principle, yes, but there are other projects you could apply exactly the same logic to, CCS being a great example. This is a strategically important sector for decarbonisation. Why do we not think about that in a similar way anymore? We picked this project out as a unique thing, but we need to see some of the wider context.

Q66 **Rachel Reeves:** Finally, Mr Hendry, you have spoken about this being a pathfinder. It works if you can then move on to other projects that enable you to reduce the costs, and I get that. Do Government need to make a decision about where they are going before they make a decision on the pathfinder project?

Charles Hendry: In the Clean Growth Strategy, Government have set out where it is going. This ties in quite neatly with that. This approach is set out in the Industrial Strategy, and it ties in extremely well with the Industrial Strategy. Overall, we have that background clarification. As Mr Howard says, there is a range of technologies that we need to look at. If we want to encourage innovation and new technologies, we have to find a—

Q67 **Rachel Reeves:** This only makes sense if you were going to go on and build other tidal projects. Is that right?

Charles Hendry: No, it makes sense on a standalone basis as well.

Q68 **Chris Davies:** This is very interesting. Mr Shorrock, I will come to you first, if I may. You have mentioned the substantial equity from the Welsh Government. Would you be able to tell us what that was?

Mark Shorrock: No, I am sorry. I believe the Welsh Government are giving evidence, and you are just trying to find a date for them and the UK Ministers to come. I can say it is material; I can say it is substantial;



I can say that we have had very meaningful discussions with thoroughly detailed models with the Welsh Government, but it is not for me to say to you; it is for them to say to you.

Q69 **Chris Davies:** You are leading the campaign here. You want the British Government to put in, and, from what I am reading between the lines, you are basically saying that it would not go ahead without the Welsh Government's support. If you read the local papers, my understanding is that it is £200 million. As far as we are concerned, it could be £2 million. Would you just like to tell us which end of the scale it is?

Mark Shorrock: I could say that it is at the substantial and material end of the scale.

Chris Davies: To me, £2 million is substantial.

Mark Shorrock: I can say it is at the extremely substantial and material end of the scale.

Q70 **Chris Davies:** I see. Ms Reeves, he is not answering my question either. How will commercial equity investment work with the Welsh Government?

Mark Shorrock: They become an equity participant. In the proposal we have put to the Welsh Government, the asset is long-term owned by Wales.

Q71 **Chris Davies:** They are making a minor equity investment—I understand that is your term—as opposed to private equity firms, which would be a major equity investment. What are they getting back from their investment?

Mark Shorrock: Fundamentally, they make a return. First and foremost, there is a commercial return charge for the money that is put forward; it is just less than what would be charged by the private sector. I would probably reiterate my answer from earlier: what you really get in return is a nascent sector.

If I can give you one stat, take a caisson yard in Port Talbot producing four draft tubes of the power plant for Cardiff. That one caisson is an £80 million spend per month in Port Talbot. You are getting that industry in your country. That is what Wales is really buying.

Wales has included tidal lagoons, plural, in the programme for Government. By starting Swansea, we start all of those production bases and all of that design for manufacture and assembly. The construction on site is going away. You are not going to have lots of trades on-site any more. You are going to do high-quality, offsite manufacture, and we are trailblazing that for infrastructure.

Q72 **Chris Davies:** I get that, and I am very keen on private development, private investment and private gain. Clearly, the constituents of Brecon or the constituents of Blaenau Ffestiniog are investing in this, because it is taxpayers' money. Whichever way it is packaged, this is taxpayers' money coming from Westminster, which goes to the Welsh Assembly,



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which is then being repackaged and is coming in as additional taxpayers' allowance to your tidal lagoon. Is that fair on the taxpayer?

Mark Shorrock: I do not see it like that. I see it as the Welsh Government making a commercial investment. They are making a return, and what they are really doing is creating an enormous new industry for jobs, a whole series of factories and a whole amenity base and education base.

Q73 **Chris Davies:** With the greatest respect, just like the Westminster Government, Governments do not have any money. Governments spend taxpayers' money, which they recoup from the taxpayer.

Mark Shorrock: Let me answer it another way.

Chris Davies: It is taxpayers' money that is being subsidised. Whichever way it is being packaged, it is subsidising the tidal lagoon, and you are happy with that.

Mark Shorrock: As a bill payer, it would be good to have another energy option in this country. At the moment we are going very narrow. We have some nuclear plants that we may or may not be able to deliver; we have good offshore wind; we have pretty much stopped onshore wind. We have an energy gap. If you take the Statkraft numbers, the Norwegian utilities numbers, we have a 20 gigawatt gap in our power. We need new power stations; it is much better if we build them ourselves.

Q74 **Chris Davies:** You are not answering the question, with the greatest respect, so I will go on to another one, if I may. Various members of the Committee have received various pieces of correspondence in the last few days. Let me put on record, first of all, that I am a supporter of the principle of the tidal lagoon. Last night, we received a letter from another company, strangely enough. They finished their letter by saying, "If the Government were to set up a suitable competition process, we will enter it for these projects. We believe others will also emerge to compete. Energy bill-payers in Britain will thus be assured of value for money".

We have heard from Mr Hendry, who has said that it is basically only your company that should be in the running. Mr Howard, from the taxpayers' perspective, should other companies be allowed to come in?

Richard Howard: Absolutely. Thinking about the evidence for why competition works, a great example is offshore wind. We went through the process of the FID-enabling projects with no competition, which had a price of £150 per megawatt hour. We then had a competitive CFD auction. There have been two rounds: one where it was just above £100 per megawatt hour and the latest one where it was down to £57 per megawatt hour. That is competition in action for you. People came forward and really drove down the cost. I see no particular reason why all of these projects should not be subject to some competition to discover the price.



Q75 **Chris Davies:** You have been shuffling in your seat, Mr Hendry. Do you still stand by the view that it should only be TLP that should be allowed to go forward with the tidal lagoon?

Charles Hendry: Yes, the person who wrote to you also gave evidence to my review. He said he said could halve the cost of it. We then put that approach out to a number of engineering companies and said, "Is this possible?" They said, "At best, it could reduce it by a sixth, but it would also make it less sustainable as a project in terms of being able to deliver for the long term". We looked into this project quite carefully and we concluded that it was actually not something that could go forward. We do have a project here; we can take it forward. If we stop this whole process now and start again from scratch, we will not have a tidal lagoon industry in the United Kingdom. People will simply walk away and say, "It is not worth doing it".

Q76 **Chris Davies:** You sat in our seat and spoke about taxpayers' money. Whichever way it is packaged and whether it is from here, Cardiff Bay or Swansea Council, we should be mindful of the taxpayer.

Charles Hendry: We should. As Minister, I took exactly the same decision on offshore wind, and we are reaping the benefits of that now. We now need to look at where we can make that happen. This is a hugely long-term industry with fantastic long-term benefits to consumers, industry and the environment. Therefore, it is something that we ought to be taking forward.

Chair: There are lots of people who would love to answer more questions, but we do not have any time, I am afraid, so I am going to call this meeting to order and swap places with the other Chair here.

Examination of Witnesses

Witnesses: Martyn Evans, John Wheadon, and Dr David Tudor.

[Rachel Reeves took the Chair]

Chair: Thank you very much for coming to give evidence in this second panel this morning. You heard the evidence in the previous panel. We have a number of questions, and business starts in the House quite shortly, so we will get a move on.

Q77 **Stephen Kerr:** TLP applied for a marine licence over four years ago. Can you describe what has happened in the process since they applied until now?

John Wheadon: Yes. As you say, the application was made in February 2014. Between that date and November 2016, we largely concluded what we call the initial assessment of that application. NRW made a public statement in terms of the fisheries impacts as a consequence of the assessment. Following that announcement in December, the company asked us to pause the determination to make a further



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evidential submission, which they made in June 2017. We have continued our ongoing assessment specifically in terms of fisheries impacts since that date, in conjunction with our consultation bodies.

Q78 **Stephen Kerr:** In the four years since the application was made, there has been a six-month pause.

John Wheadon: There was a six-month pause, yes. Between February 2014 and November 2016, from our perspective we had assessed all of the environmental impacts, if I can summarise them that way, as a consequence of that development.

Q79 **Stephen Kerr:** In normal applications, it would probably take about four months.

John Wheadon: Yes, this is not a normal application.

Q80 **Stephen Kerr:** How long did you estimate the application would take when the application was first made?

John Wheadon: There would be no estimation as an EIA project. It is important to put it into context. This is a novel development. Whilst the method of operation in terms of turbines, et cetera, is well established, in terms of the scale of development, how they are being deployed and the environment they are operating in, it is quite a novel approach. That needed to be properly assessed, so there would have been no definitive timescales set against the determination.

Q81 **Stephen Kerr:** Would you have had an expectation about how long the process might take?

John Wheadon: No, we would not pre-determine at all in terms of how long it would take.

Q82 **Stephen Kerr:** It was open-ended.

John Wheadon: Again, we would want to expedite and conclude any determination at the earliest opportunity. In terms of other processes or certainly other activities within that process, particularly public consultation and consultation with other statutory consultees, that needs to be factored in as well.

Q83 **Stephen Kerr:** Can you say at this point how much longer it will take before you can reach a decision? Do you have a date in mind by which you are going to make a decision?

John Wheadon: No. Again, I would not want to pre-determine how long that will take. It is an ongoing process. We are waiting for a further submission in the coming weeks from the company, specifically in terms of the fisheries modelling. That will inform the next steps in the process.

Q84 **Stephen Kerr:** Other than the fisheries modelling you have just described, are there other aspects of the project that you are still awaiting information on before you can make a decision?

John Wheadon: It is my understanding that the fisheries modelling is the main outstanding issue to be resolved.



Q85 **Stephen Kerr:** When the fisheries modelling is available to you, you will be in a position to make an evaluation and a decision.

John Wheadon: We will then understand the environmental impacts of that scheme and what that means in terms of the next steps of the determination.

Q86 **Antoinette Sandbach:** Mr Wheadon, are you aware of concerns raised by Cornwall Against Dean Super Quarry about data provided by a company run by Mr Shorrocks, namely that marine environmental data collated on behalf of Mark Shorrocks's company Shire Oaks Quarries Ltd was scant and misleading compared by a 14-year research project undertaken in that area by Seasearch.

John Wheadon: Are you talking about in relation to the quarry development?

Q87 **Antoinette Sandbach:** Are you aware that other applications made by this applicant, Mr Shorrocks, have been described as misleading in terms of the environmental data that has been provided to authorities in relation to that planning application?

John Wheadon: No. I can only comment on the applications that have been made to Natural Resources Wales.

Q88 **Albert Owen:** Can I follow on from Mr Kerr with regards to the decision? Are you waiting at all for BEIS and Tidal Lagoon Power to agree on a contract for difference so the project goes ahead? Is that part of your consideration?

John Wheadon: No.

Q89 **Albert Owen:** That was a very straightforward answer. I will ask another straightforward question. Does Natural Resources Wales have the resources to do these not ordinary schemes? If this is a success, there are going to be more around Wales. There is the nuclear project in north Wales; there is offshore wind. Are you kitted out for this job?

John Wheadon: In terms of resources in Natural Resources Wales, yes. There are people dedicated to the particular project, both in terms of my regulatory role in my department and Martyn in terms of his advisory role. Equally, there is a wide range of external consultees. In particular we have contracted Cefas to provide us with independent expert advice as well. Yes, I am certainly content that the resources within Natural Resources Wales dealing with this application are sufficient.

Q90 **Albert Owen:** Mr Evans, you are indicating that you want to comment.

Martyn Evans: On the slightly wider position in terms of resourcing in the organisation, we have some basic competencies in the organisation on the technical and advisory side. When we encounter major applications for development projects in Wales, we do sometimes enter into planning-performance agreements with the applicant to support the costs and resources needed by us to advise on the pre-application stages of development consent orders for nationally important infrastructure



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projects like the lagoon project. That is not uncommon. So far, we have done it for the Transco pipeline when it came through Wales. We have had a prior planning-performance agreement with Tidal Lagoon Power during the DCO stage because of the acknowledgement of the additional resources it takes for us to service such a big scheme.

Q91 **Albert Owen:** How does your timetabling compare with England, Scotland and Northern Ireland, for example? If an application was made in a different part of the United Kingdom, do you do best practice with them so you can use some of their information?

John Wheadon: Yes. In terms of how their processes play out, in some ways we would largely be similar because we are working against legislation, so there would be the same requirements. If there is any good practice in terms of evidence, et cetera, we expect that to be shared. I expect there are similarities; there are probably some subtle differences in terms of the devolved administrations and the bodies that undertake the activity, but, yes, the law is largely the same across the UK.

Q92 **Albert Owen:** But there are additional requirements from the Welsh Government. Do they help or hinder you?

John Wheadon: There are additional requirements from the Welsh Government?

Albert Owen: Yes.

John Wheadon: What do you mean?

Q93 **Albert Owen:** In terms of licensing. Because we have devolution now, there are many devolved powers that exist.

John Wheadon: In terms of actual submissions that are required from the company, there are no additional requirements within Wales.

Martyn Evans: If this application was coming forward in England, the marine licence determination would be done by the marine and maritime organisation, with advice and support coming in from the likes of Natural England and the Environment Agency.

In Wales, because of the devolved situation, it just so happens that Natural Resources Wales is the determining body for the marine licence and it also has its statutory advisory functions aligned to that. We separate those out internally through two different channels to provide advice internally to the decision-making process.

Q94 **Albert Owen:** Is that advantageous to Wales? Is that advantageous to a project coming to Wales?

Martyn Evans: It should be, but it does not detract from the fact that this is a very complex scheme.

Q95 **Liz Saville Roberts:** Mr Wheadon, you responded to Stephen Kerr's question by saying that you were awaiting the fisheries modelling, which was critical. Do you know when is realistic to expect some sort of



response regarding that?

John Wheadon: Yes, the primary evidence submission of all the new evidence was made in June last year. That has been going through a consultation process in various iterations. We actually instructed the company to undertake some work in the last couple of months and we are expecting that submission in the coming weeks. We are expecting it this month.

Q96 **Liz Saville Roberts:** We have heard about a litany of prevarication, procrastination and people awaiting decisions. Again, how far off is this going to be? When do you think you will be able to reach a decision?

John Wheadon: As I say, it is impossible to say. Once they make that submission in May, that will be assessed in conjunction with our consultation bodies, and that will inform the next steps in the process. It is certainly very well advanced in terms of agreeing parameters, the content of our modelling and ensuring it is credible in terms of being used as a piece of evidence to inform our decision-making. It is at an advanced stage.

Q97 **Liz Saville Roberts:** There are two other questions. You also mentioned that you required further technical assessments in relation to the administrative requirements of the Water Framework Directive and the Habitat Regulations Assessment. How demanding are those and, again, what is the timeframe in relation to them?

John Wheadon: Once we have completed the modelling work, that will inform the overall fisheries impact. Depending on the level of those impacts, that will inform our assessments around WFD and HRA and whether they are actually required. It can be an extensive piece of work and it can go on for some time, because we are moving into delegation processes and particular tests set by Europe that will need to be considered and factored in.

Q98 **Liz Saville Roberts:** From Natural Resources Wales' point of view, how much more time do you need? You have mentioned May; we are in May. How much more time do you need to be able to come to a clear conclusion?

John Wheadon: As I say, I cannot pre-determine what the outcome will be. The next step is the submission in May, and that will inform everything else in terms of the process.

Q99 **Liz Saville Roberts:** Given that this is a pathfinder project, and there will be investigation ongoing built into it, can that be factored in with the marine licence? There is a concern now that this is a piece that could possibly be holding the project back, moving ahead.

John Wheadon: In terms of the licence, we look at the development in isolation. I understand in terms of descriptions around pathfinder, et cetera, but we need to take it on its own merits. I am sorry; could you just ask me the question again?

Q100 **Liz Saville Roberts:** I was just trying to get a sense of the time. You



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have probably answered that you cannot answer that there is a definite time by which you can close.

Martyn Evans: There are processes around Habitat Regulations Assessments and Water Framework Directive assessments. It is not as though we are waiting for evidence to come in before we start work addressing those European dimensions that have to be wrapped up in any determination. We and the Welsh Government, who also have a role in this, are reasonably far advanced in doing all the preparatory work. It is not as if we have not been doing any of this. To be fair, the applicant has as well as the Welsh Government. We are prepared for this work to come so it will not slow down the process anymore.

Q101 **Liz Saville Roberts:** I have one particular question I would like to ask. Of course, I have the community of Fairbourne in my constituency, so I am very alert to the threat of coastal flooding to coastal communities. Fairbourne is a very small community. There has been a lot of work done there. There are questions about the larger communities in Wales and flood protection, frankly. How do you balance the potential impact on biodiversity in an environment alongside the potential impact on flood protection?

Martyn Evans: There is an interesting balancing act there. The physical presence of an 11-kilometre lagoon wall will have a detrimental impact. There will potentially be a tidal flood consequence, because of the refraction of the wave energy from the impact of the lagoon wall down on the Mumbles Beach. That has been factored into the decision signed off by the then Secretary of State Amber Rudd in 2015. It has been factored in and mitigation has been put in place to offset that flood impact. That has been considered. John, I am not sure whether that is a consideration in the marine licence.

John Wheadon: Yes, in terms of delegations, et cetera.

Q102 **Liz Saville Roberts:** Are there benefits in terms of flood protection as well? Are those factored into the consideration?

John Wheadon: Yes, it is in terms of either risk or benefit from the actual development.

Liz Saville Roberts: It sounds to me as if you are treating it more as a negative rather than as being potentially beneficial.

Q103 **Chair:** How much money has Natural Resources Wales spent on assessing and working on this application?

John Wheadon: There has not been a full assessment in terms of how much has been spent.

Q104 **Chair:** Could you get back to our Committees on that? I understand you need to look at all the evidence, but the problem with something taking so long is, presumably, that people are spending time working on this, which of course costs taxpayers' money. If you could, please come back to the Committee with some estimates on the total amount of the cost so far that Natural Resources Wales has spent on looking at this.



Is there maybe also an issue of transparency here? Again, we want you to make the right decision and get the decision right, and that takes time. There is also an issue around transparency to the company and other stakeholders who have an interest in this. You have said repeatedly that you cannot tell us how much longer it is going to take, but most agencies have timeframes and commitments they make to people, both in the public and private sectors. I do find it a little bit surprising that you do not seem to have anything like that at Natural Resources Wales.

John Wheadon: In terms of the dialogue with the company and the potential steps that may be in the process, there is dialogue with them in terms of what may need to happen.

Chair: There is a wider issue of transparency. A lot of people have an interest in this; a lot of people have come to see this evidence session today; lots of people have written, contacted and spoken to members of the Committee. There is obviously a real interest in this. Greater transparency about your decision-making process and the timeframes around it would be welcome.

I know you cannot answer that today, but I and perhaps other members of the Committee find a little bit surprising both the amount of time and the lack of clarity around the decision-making process and what else you will need to look at apart from the fisheries analysis that you are hopefully going to be completing at some point this month. Maybe you could also come back on how you rate your transparency as an organisation.

Q105 **Tonia Antoniazzi:** Given the interests at stake, are you concerned about possible appeals to your decision regardless of whether it is an approval or rejection of the licence? You have said that this is well advanced. Is there a risk of appeal adding delays to your decision process at NRW?

Martyn Evans: There are risks, and it is subject to heavy scrutiny, and you are dead right about the need to make the decision the right one, particularly if it is intended to be a pathfinder for other schemes. You could take the other view and say, "Well, you can afford to take a few chances with the evidence here and not get it right, because you will learn as you go along". That is true, but, equally, if it is to be the world's first, the eyes of the world will be on us.

That is notwithstanding the duty that is on us to oblige to the legislation that underpins all of this. There is a suite of primary legislation that drives us towards taking an evidence-based approach to this. We are expecting any decision we make on the marine licence to be heavily scrutinised and certainly challenged legally, either by judicial review or another legal challenge.

It is important for us, representing the Welsh Government's interests here, as the Welsh Government's environmental protection agency, to get this as right as we possibly can. We are heavily dependent on the applicant to bring forward the evidence to us for the assessment, which allows us to make that decision.



Q106 **David T.C. Davies:** Dr Tudor, the Crown Estate owns the seabed and they will in perpetuity. If this structure does not work out for any reason, what responsibility would you have for dealing with it?

Dr Tudor: The Crown Estate is an independent commercial organisation. Our role is set out by the Crown Estate Act. We lease the seabed for energy projects, whether they are wave, wind or tidal such as this one. For us, we are very clear—this was in our documents when we went out to pre-qualification for invitation to tender—that the long-term liabilities as a hazard would not sit with the Crown Estate. We would look to the developer to work on that.

Q107 **David T.C. Davies:** How do you ensure that whoever is responsible for constructing it has the wherewithal to remove it if necessary or, at the very least, to finish the project? That has to be something you have to have an interest in, does it not?

Dr Tudor: Yes. For us, very clearly in our invitation to tender and through our negotiations with any counterparty on any part of the seabed around England, Wales and Northern Ireland, we need to ensure the project is viable, that it can be build and that the decommissioning liabilities are looked after, because it does not sit with the Crown Estate. They are the key elements we look for; you are absolutely right that this is a key consideration for us.

Q108 **David T.C. Davies:** Do you have any concerns about this at the moment?

Dr Tudor: For us, it is very clear that there has been a transparent process up to June 2015, when we went into negotiations with Tidal Lagoon Power, and those negotiations have not concluded. They are still in process.

Q109 **David T.C. Davies:** Tidal Lagoon Power would not have the resources to finish this project if the construction costs came in at a much higher level than is expected. Will you be taking steps to ensure that whichever construction contractor is used will have the financial ability to finish the project?

Dr Tudor: I cannot comment on the financial strength of TLP to finish the project, but certainly during our negotiations, before they conclude, we would have to be satisfied and happy that all the processes in the project are in order from pre-construction to the end of its life.

Q110 **David T.C. Davies:** Again, to echo the question earlier from Rachel Reeves, what kind of scrutiny can we as MPs have and what kind of scrutiny can the public have over the decision you make?

Dr Tudor: We are comfortable; we are very transparent. I will very briefly give you the process we went through. We held a wide invitation to the market for interest in tidal lagoons or tidal range power back in 2013. That led to a pre-qualification questionnaire and then to an invitation to tender for those who were interested and who passed the pre-qualification.



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That process was open and transparent to the market. Once we enter into negotiations, once somebody has passed the invitation to tender, as you would expect in any commercial negotiation, those negotiations remain confidential. We make a commitment to announce the outcome of those negotiations at the end of the process. That negotiation has not concluded.

Q111 Mark Pawsey: Dr Tudor, to follow up on that, this morning we have heard about the very substantial investment of money, time and effort by lots of organisations to get where we are. We know we need government approval, and Mr Wheadon and Mr Evans have told us about the delays in getting NRW approval. How long have you been talking to TLP? When do you expect your negotiations to be concluded?

Dr Tudor: We entered negotiations with them around June 2015. That process has not concluded or closed. Our last substantive negotiation on a commercial basis was in January 2017. We are ready to begin discussions straightaway, immediately, to pick those up.

Q112 Mark Pawsey: How long will your process take? Let us say the Government took a decision in the next couple of months to proceed and NRW were happy. Would your organisation be putting an impediment to the delivery of this project?

Dr Tudor: It is our job to enable development on the seabed. For us, we are ready to talk tomorrow. It would not take days; it would not take weeks. I cannot give you a timeline, because ultimately this is a two-way process. You put out an invitation to tender, with clear terms, to the market, and that negotiation has not closed. We would look to close that as soon as we possibly could.

Q113 Mark Pawsey: Have you dealt with a project of this nature before?

Dr Tudor: We deal with many projects of a larger scale on the UK seabed. We are very proud of the work we have done in enabling offshore wind.

Q114 Mark Pawsey: On the basis of the other projects you have done, how long would you expect this to take?

Dr Tudor: This is the first of its kind; it is unique. I could not put a timeline on it. What I could say is that there are large wind projects and small wave and tidal projects. Some never proceed; some do proceed. There is a myriad of different projects. For us, we are ready to talk and to begin discussions again.

Q115 Mark Pawsey: Could it be concluded in a matter of weeks?

Dr Tudor: I would not like to put a timeline on it. This is a very complex project. We would have to revalidate the numbers. We have not sat down with them of a long time. We would have to sit down with them and look at where we were.

Q116 Mark Pawsey: Would it be a matter of months?

Dr Tudor: I would not like to put a timeline on it.



Q117 **Mark Pawsey:** Is it a matter of years?

Dr Tudor: I would not like to put a timeline on it.

Q118 **Mark Pawsey:** That is not terribly helpful, Dr Tudor, is it?

Dr Tudor: What I am really trying to explain is that we are very used to these kinds of projects, not tidal lagoons but—

Q119 **Mark Pawsey:** In which case, it should not be that difficult for you to put some kind of estimate on the amount of time this will take.

Dr Tudor: I do not think it is particularly helpful for me to give any guesswork, frankly. This is a negotiation; it is a two-way negotiation. We are very clear on our offer to the market. Those terms are out there. We will conclude as soon as both parties are able to. That is the only answer I can give you, and that is the honest answer.

Q120 **Geraint Davies:** Assuming BEIS, Tidal Lagoon Power, Natural Resources Wales and everybody else agree that everything is fine and they want to hurdle ahead, there will not be a constraint from you.

Dr Tudor: For the UK seabed, it is our job to give the market the terms, to carry out negotiations on an agreement and to close that agreement. We are an independent commercial organisation with a mandate from various Acts of Parliament, and we will conclude our work in an appropriate and timely manner. Like I said, we are used to dealing with large energy infrastructure projects.

Q121 **Geraint Davies:** If Treasury, BIS, Tidal Lagoon Power and Natural Resources Wales all agree to do it, there will be a very short period of time that you have to agree, will it not?

Dr Tudor: Our terms are in front of the developer. Those terms are open for negotiation to a degree. We can close those negotiations as soon as we are able to. We are independent. Whether a marine licence is granted is not relevant to our work.

Q122 **Geraint Davies:** Finally, can I ask Natural Resources Wales whether you are confident that the excavation involved in the lagoon will not dig up any heavy metals that threaten to contaminate Swansea Bay? Has that been looked at?

Martyn Evans: Yes, there has been some good work done by the applicant, to be fair, on investigating the sediment columns. They have done some drilling where they intend to put the concrete blocks in for the core of the lagoon itself. There were some traces of heavy metals found from the old copper works, but the company has found a way of avoiding disturbing those sediments. It should not be an issue.

Q123 **Antoinette Sandbach:** I wanted to come back to the fisheries modelling, which you said was the issue at the moment. We have had evidence that there was a substantial disparity between developer's original environmental statement, which indicated a 3% mortality rate, and your own conclusions in December 2016, which indicated a 21% to 25% mortality rate. The species affected are protected under the



Habitats Directive Annex II. Have you now resolved the appropriate methodology for modelling the impacts on fish?

John Wheadon: The methodology has been approved. It is about the parameters that inform that methodology. That has largely been the discussion and debate in the consultation responses we have received.

Q124 **Antoinette Sandbach:** I alerted you earlier to concerns in relation to another planning application elsewhere and the quality of data provided by that applicant. In doing your due diligence, is that the kind of matter that you would take into account? Are you prepared to approach the people undertaking the 14 years of research in relation to that project to see where the discrepancies arise? In other words, what I am asking you is whether you are in a process where you can trust the information being provided to you by this developer?

John Wheadon: It is fair to say that we will take in good faith any evidence submitted to us as part of an application, but that evidence will be scrutinised—and that is certainly what has happened in this case—either by our own technical experts in Martyn’s department or, as I say, by external consultees, such as Cefas, who will scrutinise that and ensure it is valid and that we can have confidence in it.

Q125 **Antoinette Sandbach:** But given the discrepancy between the information provided by the developer, which was an insignificant effect, to your own conclusions, which was a major adverse effect, how do you approach the quality of information, where there is such an evidential discrepancy in the information that is being provided to you and your own monitoring processes?

Martyn Evans: It would be useful for you to understand why fish is taking such a long time to resolve. When the development consent order was issued in 2015, the decision made a number of requirements, effectively planning conditions. In her decision to support the scheme and issue the development consent order, the Secretary of State set aside fish as an unresolved matter. We did not quite bottom the fish issue out with the applicant at the time. The whole issue of the understanding of impacts on fish has bled into the marine licensing process. I just wanted to set that out so you can understand why it is taking such a lot of time.

You mentioned the issue around the discrepancy between the applicant’s claims of an annual mortality rate around 3% and ours, which are between 20% and 25%. That is annual mortality rate, so you compound that each year. You are looking at potentially local extinctions in the three rivers affected in four to five years. That is something that we have a duty to consider. As I understand it—correct me if I am wrong—the company have now come back with some more realistic numbers. Those low levels of impact given to us by the company were predicated on their lowest and most favourable scenarios of impact based on the models we have agreed. We have now persuaded the company to come back with parameters that are going to be far more realistic. We may



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end up somewhere in between, which would be a reasonable way forward by way of making a determination.

Chair: Thank you very much. Thank you to all three of you for coming to give evidence to us this morning on this issue.