

Energy Security and Net Zero Committee

Oral evidence: [Pre-appointment hearing for the
Chair of the National Energy System Operator, HC
573](#)

Wednesday 24 April 2024

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Members present: Angus Brendan MacNeil (Chair); Vicky Ford; Mark Pawsey;
Derek Thomas.

Environmental Audit Committee member present: Philip Dunne.

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Witness

I: Dr Paul Golby, Government's preferred candidate for the Chair of the National
Energy System Operator.



Examination of witness

Witness: Dr Paul Golby.

Q1 **Chair:** Good morning. Welcome to the Energy Security and Net Zero Committee. This morning we have a pre-appointment hearing with Dr Paul Golby, the future chair of the National Energy System Operator. Welcome, Dr Golby. It is good to see you here this morning. Are you looking forward to your new role?

Dr Golby: Thank you for seeing me. Yes, I am very much looking forward to the new role.

Q2 **Chair:** What personal qualities would you say you bring to the chair? What is your background and experience?

Dr Golby: I am an engineer by background.

Chair: That is always a good sign.

Dr Golby: I am a fellow of the Royal Academy of Engineering. I started off life in the oil industry but moved into the electricity sector about 25 years ago, so I have been involved in generation, distribution and supply of energy. In my post-executive career I have also chaired complex companies across aviation, construction and energy. I bring that engineering background, looking for data-based solutions, and having to take people with me in chairing those quite complex boards.

Q3 **Chair:** I am sure that throughout your working life you have been learning and adapting in many ways as you go forward. As I often said myself when I was Chair of the International Trade Committee during Brexit, I know more this month than I knew last month, and I will know more next month. The question I am trying to drive towards is not quite about what you think are weaknesses, but what you think you will be learning. What do you think you will need to know? What are your areas that you will be developing in this new role?

Dr Golby: There will be a lot to learn. Technology is changing very quickly. The technologies that we can bring to bear today were not in existence five or six years ago, and there will be new technologies to think about. This is a national issue. We need to take a very wide lens to look at these issues, and we need to take our people with us. Although I have experience with airspace change, dealing with local communities and getting their input and their views to change, this is quite a significant challenge as we go forward and try to plan the energy system of the future.

Q4 **Chair:** You made a point about "national". In energy areas the terminology is quite exact. People do not have poles; they have pylons. They do not just have cables or wires; there is a transmission network, a distribution network, and there are particular pigeonholes. I do not know if you have given the name any thought, but the name of this new organisation, the National Energy System Operator, is quite vague. Which



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nation are they meaning?

Dr Golby: I did not name it, of course. I cannot claim ownership or dis-ownership. It is a national problem.

Q5 **Chair:** Which nation?

Dr Golby: It includes all nations. It very much includes the devolved nations.

Q6 **Chair:** It does not include Northern Ireland.

Dr Golby: It does not include Northern Ireland because the system is currently not as firmly connected to Northern Ireland as it is to Wales and Scotland. The energy component of it is that there are many energy vectors here. Electricity is a key one, but we also need to think about gas and hydrogen, and in the future we need to think about carbon capture and storage. It is a much wider brief than just electricity.

Q7 **Chair:** Given that engineering is not loose with its language, would the Nations' Energy System Operator have been more exact than "national"? There are many nations that are covered with this energy system operator.

Dr Golby: Indeed. I am more focused on what we need to do as opposed to the title. The title is there. As I say, I was not the architect or the designer of the title.

Chair: Fair enough. You are suitably absolved from that heinous sin. I would like to say that we are welcoming Philip Dunne as Chair of another Committee with us this morning, the Environmental Audit Committee.

Q8 **Philip Dunne:** At the moment, our Committee is undertaking an inquiry into decarbonising the grid, which is why I have been invited to join this session. Thank you for including me.

The Environmental Audit Committee visited the grid operations centre earlier this year, where it was very clear to us that the primary role of the Electricity System Operator is to balance the grid. The role of the new organisation, which you are going to be chairing, is much wider. It covers planning capacity and has a responsibility for delivery of capacity while advising the Government and Ofgem. At this point before you start it, do you have a sense as to whether or not NESO is going to be able to have the resources and the ability to undertake such a significant role?

Dr Golby: That is a very good question. The first observation I will make is that taking the ESO out of National Grid and putting it into Government ownership is not a simple lift-and-shift operation. We need to build substantial capacity and capabilities—capacity in terms of moving into the planning of the grid rather than just operating it, and capabilities in terms of building gas expertise and building other expertise as we move into that much wider planning role.

Q9 **Philip Dunne:** It is also changing very significantly because the



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Government have announced in the autumn—following the Energy Bill—this endeavour to accelerate bringing capacity on to the grid for new renewables and so on. Ofgem has now changed the rules to allow you to require companies to either use or lose their grid slots. What enforcement powers will you have to be able to make that happen?

Dr Golby: The rules are currently being developed. Connections are clearly a problem; they are taking too long, and we currently have about five times more connections in the queue than we actually need for net zero. A key component of this role is to work out the spatial plan, when we are tasked; we have not been tasked by the Government yet.

If I can stand back and just put this into some terminology, the current grid was designed around a small number of large power stations, traditionally in the Midlands, mainly coal-based. Of course, they have now gone. We have a lot of wind capacity around the coast. We have batteries coming in. This is a far more complex system. If I use an analogy, it is expecting our motorway systems to work if we close Edinburgh and move it to Cornwall. That is the scale of the task here.

Let me give you another example. I was just reading the other day that Blackstone are potentially buying the Britishvolt factory, the battery factory that did not take off. My understanding is that will be about a 1.1 GW load; that is like putting the west of London into that area. You start to see the need to completely look at the grid and how it is designed, and then to actually help orchestrate what technologies are placed on the grid and where.

I am not suggesting that this organisation becomes the fat controller or anything like it. A thin conductor would probably be the analogy. We need a plan. We need a strategy that will then allow people to connect the right technologies in the right place. That is what we are aiming to do, and we need to build capability and capacity in the organisation to allow us to do that.

Q10 **Philip Dunne:** That is really where I was going; from the outside, before you took this assignment on, you presumably had an opportunity to interrogate some of the senior management in the organisation. What confidence do you have that you have the resources within the organisation to be able to undertake this task?

Dr Golby: At the moment we have many of the core competencies, as you would expect, particularly in electricity. We do not have the full complement of capabilities in gas and in some of these planning areas. We will probably need to double the size of the operation, adding maybe 1,000 or 1,500 people to the organisation to deliver, assuming the Government ask us to produce this spatial plan.

Q11 **Philip Dunne:** That takes me on to my last question. It is about governance, really, and the relationship that you will have with Ofgem and the Department. Is it part of your brief to review the governance



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arrangements from the NESO side of the equation, or is that something that you think is down to Ofgem and the Department to oversee?

Dr Golby: I almost see this as a triumvirate, if I can use that word. There has to be a tensioned relationship between this new organisation, the Department and Ofgem. We have to find a way of working together to deliver for this organisation and for the country, albeit with tension. Managing that relationship is going to be a key part of the role, if I become chair.

Q12 **Philip Dunne:** Have you had experience from your previous roles in tackling your regulator?

Dr Golby: Yes. I currently chair NATS, formerly the National Air Traffic Services. I have a similar relationship there, of course, with the Department for Transport and the CAA, which is my regulator in that role. I have the experience from there. I also chaired one of the major research councils for the Government, so I have a similar role there in keeping that tensioned, arm's-length relationship with the Government.

Chair: Thank you very much to Philip Dunne, Chair of the Environmental Audit Committee. You can see they are a lot tougher than we are here. Maybe not—let us see.

Q13 **Vicky Ford:** I am the only woman on this Committee. I have met some great women engineers, but we do not have enough, and they do not have enough role models at the top. Are no women up to this job?

Dr Golby: I agree with you. I cannot change my gender sitting here in front of you.

Q14 **Vicky Ford:** You will have a really serious, leading role as the head of our energy system. What are you doing to encourage more diversity?

Dr Golby: I have a background in encouraging diversity in the companies that I have chaired. If I take Costain, a major construction company that I chaired, we had 40%.

Q15 **Vicky Ford:** That is your background. What are you going to do?

Dr Golby: That is my background. I will bring the same approach in this role. It is not just gender or ethnicity; it is about diversity of thought and people approaching a problem from a very different angle. That is the way I have built boards in the past, and that is what I would intend to bring to this new organisation.

Q16 **Vicky Ford:** What about with your staff?

Dr Golby: I would do that with the staff too, absolutely. Again, I will use a point from my background. At Costain we frequently came in the top employers for women—bearing in mind, this is a construction company—and 50% of our graduates were females.

Q17 **Vicky Ford:** You currently chair NATS. NATS failed spectacularly last



summer when its system crashed. There were 2,000 flights cancelled and hundreds of thousands of people stranded. Why did no one lose their job?

Dr Golby: Let me put that into perspective. NATS exists to manage safety—the safety of the flying public. We always put safety first, and if that means reducing flights, that is what we will do. That is what people would expect us to do. I understand the frustration. I will apologise again, as my chief executive has apologised. We have a very good history of systems working. This is the first failure of any note in 10 years, and it was a very specific event that caused the failure. The system involved has been in operation for five years, it has handled 15 million flights successfully, and it failed on this occasion.

Q18 **Vicky Ford:** I hear you that system failure can be okay, provided the safety is there, but if our national energy system, which you will be operating, fails in the depths of winter, people will die. System failure is not okay in your new job. How do you make sure that does not happen? In this, people want clean energy, secure energy and affordable energy. What is most important? Is it reliability, affordability or meeting net zero?

Dr Golby: They are all important, but I echo your point that we cannot tolerate supply failure. We have to keep the lights on. Probably more importantly, in some cases, we have to keep the internet working. Security of supply and keeping the lights on is absolutely the first priority of this organisation. We clearly need to drive to net zero and we need to do that at an affordable cost, but security of supply and keeping lights on is the prime function.

Q19 **Vicky Ford:** How are you going to monitor those different priorities—reliability, affordability and environmental impact?

Dr Golby: We will, of course, monitor them all. Frankly, we monitor reliability minute by minute. As you know, you cannot readily store electricity for any length of time, so we have to balance the system. There are complex systems that enable us to monitor that. They still need to be upgraded—I am not going to duck that—so we will be monitoring that. I talked about the spatial plan. We will be moving towards a situation where we can connect more net zero energy. Of course, we have to do that in a way that is most affordable, so we will be looking at options and putting options to Government that allow us to do that at the most affordable cost.

Vicky Ford: You have not mentioned cleanliness and environmental impact, but we will move on.

Q20 **Mark Pawsey:** I just wanted to follow that up and understand the powers that the new organisation, the National Energy System Operator, has to do what you just spoke about. Vicky Ford has drawn attention to the dilemma between keeping the lights on and moving to net zero. How does your organisation make things happen? We are not a top-down Government-led organisation anymore. We are relying on private players to come in and make those investments. How are you going to make it



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happen?

Dr Golby: We do not and will not have the powers to make it happen. We are not the fat controller. We are the thin conductor, as I described it.

Q21 **Mark Pawsey:** I understand that, but what are you going to do to get these players in the market to do what everybody here thinks they should be doing?

Dr Golby: What we need to do is, when tasked, produce this spatial plan to identify where connections ought to be made and, broadly, what types of technologies need to be there, and then advise Government on what policies are required to encourage that private investment. In the main, this will be private investors.

Q22 **Mark Pawsey:** You do not have any power. Are you just an influencing body?

Dr Golby: We are an influencing body that advises the Government on the policies they require to encourage that investment.

Q23 **Mark Pawsey:** You are just bringing forward various reports that may or may not get implemented by Government?

Dr Golby: No, we are bringing forward advice and then we are setting out very clear, data-driven, robust views on how the infrastructure should be routed, what the engineering should be and, hopefully, taking advice on the environmental impacts of that infrastructure.

Q24 **Mark Pawsey:** You have run some big businesses and you know that businesses only do things if it is in their financial interest to do that. What influence will you have on the financial regime to trigger the approach that you have just spoken about in a technical way?

Dr Golby: We will be advising the Government on what policies are required to give those financial incentives for investors to make those investments. You are quite right: investment is a voluntary act, and therefore the Government will have to devise policies that bring those investments forward.

Q25 **Mark Pawsey:** How will we measure your success?

Dr Golby: First, to go back to the previous question, it is about keeping the lights on. This is a major change in this organisation.

Q26 **Mark Pawsey:** We can keep the lights on by not decommissioning coal and not decommissioning nuclear.

Dr Golby: You arguably could, except, as I have just said, investment is a voluntary act. We have many power stations coming to the end of their lives, so they will need to be replaced, whatever happens. We cannot do nothing. Doing nothing is actually an action in itself. It is about keeping the lights on, bringing this organisation up to full strength and in a way that it can start delivering on the priorities that the Government have set,



and then delivering on this spatial plan so that we have a clear blueprint for the future, so that we can all see how we are approaching this as a country.

Q27 Derek Thomas: Decarbonising the energy sector is key to delivering the Government net zero ambition. Do you see natural gas as being phased out as quickly as possible from there?

Dr Golby: I see natural gas as a transition fuel. It clearly produces carbon, and therefore does not have a long-term place in a net zero carbon world. As the Secretary of State said a few weeks ago, we will go through a transition and we will need some gas-fired power stations to see us through that transition. Of course, transforming heat in people's homes is not as straightforward as changing a power station, for example. Yes, gas will need to be phased out, but there is no quick fix.

Q28 Derek Thomas: Particularly in domestic properties, do you have any idea of when that might be a reality? Obviously, it is early.

Dr Golby: It is too early. I do not have a view on that at this point in time.

Q29 Derek Thomas: Given that that is likely to happen, what role will NESO have in getting that message across to consumers and preparing them for their move to net zero?

Dr Golby: The organisation will have a role. It will not have a public role, necessarily, in its own right, but it will be providing very open, robust and clear advice to Government, and, of course, engaging with local communities where we are suggesting that infrastructure needs to be built. We live on a crowded island, relatively speaking, and we need to take people with us when we put some of this new infrastructure in place.

Q30 Derek Thomas: How important is it that we deliver a cross-party consensus on this? Do you see your role as trying to foster and nurture that?

Dr Golby: It is important that there is a cross-party consensus on this. From where I am sitting, there appears to generally be one. There may be a difference in timing, but the consensus does exist. The organisation will be an independent organisation, independent of Government, and therefore has to be free to speak to all political parties, to make sure that we can do this together. We have to work together as a nation to achieve this, because that is the only way to do it.

Q31 Derek Thomas: Finally, very briefly, when you are considering the energy mix, and particularly homes not on natural gas but in off-grid areas, will you be part of the discussion and the engagement with Government about what alternatives there might be? The Committee went and looked at a couple of alternatives, such as HVO, back in west Cornwall at the weekend, but so far the Government have not really embraced them. Do you see your role as looking at the energy mix and



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providing some guidance on what would work?

Dr Golby: We will do that if we are asked. I am not aware that we have been asked by Government to do that. My view is that we need a diverse energy mix. As we have seen in Germany, for example, putting all of their eggs in one Russian basket was not a clever idea—being over-reliant on Russian gas. Diversity in all forms is important.

Q32 **Mark Pawsey:** Dr Golby, our consumers have paid through their bills to create the infrastructure to supply gas to 80% of the homes in the UK. You have just said that natural gas is not a sustainable long-term solution because it produces carbon. Should we not be putting hydrogen in there instead?

Dr Golby: Yes, we certainly should be putting a blend of hydrogen. I am not sure of the engineering at this point in time as to what level of hydrogen we can put through the existing system. I do not want to be too “engineery”, but hydrogen molecules are tiny compared to gas molecules, and therefore leakage through the existing system is quite difficult to manage. It is certainly something we should look at.

There are very clearly parts of industry that could convert to hydrogen. One looks at the Humber area, for example, where we could build out from those industrial clusters, maybe with carbon capture and storage, and extend that hydrogen into the local communities in those areas.

Q33 **Mark Pawsey:** Do you see a substantial role for hydrogen in decarbonisation of home heating?

Dr Golby: I certainly do. It goes back to my previous comment that the diversity of fuel sources is really an important key to the future.

Q34 **Chair:** You mentioned the fat controller and the thin controller a couple of times.

Dr Golby: I mentioned the thin conductor. This is almost conducting an orchestra, if you like.

Q35 **Chair:** I did start off by mentioning how I get the terminology correct, and I have misquoted you. You have said the fat controller and the thin conductor. That is a humorous line, but it is almost pushing at a change in philosophy in the UK. The UK has been a place where the market will take care of everything. The North sea sectors are leading the market, whereas Norway plans things and standardises things. Is the UK having to move to having a system brain and somebody thinking about this, rather than just, “It will be fine; we will leave it all to the market”?

Dr Golby: That is behind the creation of this organisation. We do need a brain. That is why I deliberately used the term “thin conductor”. I do not think this country—

Q36 **Chair:** You do not think this country is ready for a fat controller.



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Dr Golby: I do not happen to think that Russian tractor factories really deliver the goods.

Q37 **Chair:** What about Norwegian energy firms?

Dr Golby: Yes, you have a very valid point there. We cannot just rely on the market to deliver the transformation we are looking for. We need to conduct that orchestra of investment, if you like.

Q38 **Chair:** It is difficult bringing about change, because there is a change of philosophy required to get within the transition. Perhaps once a transition has occurred you can allow a certain philosophy to exist within the ecosystem of the new transition, but to make the transition you need the system brain.

Dr Golby: This is a major change in the energy system of this country; it is bigger than anything we have seen over the past few decades. We have to have a strategic plan, and you can only do that if there is some element of control.

Q39 **Chair:** Do you see constraint payments as a sign of failure in the development and balancing of the grid? If I could build something somewhere and make a lot of money not generating or else needing to bring on emergency generation somewhere else, it is not the best, is it?

Dr Golby: It is a consequence of not having the grid that we need for the future. The whole focus of the spatial plan when we get there is to not build generation that is either greater or lesser than the grid can manage. Constraints should ideally be eliminated, although it will not always be possible to do that.

Q40 **Chair:** There is a lot of chicken and egg in there, is there not?

Dr Golby: There is. I keep going back to the spatial plan. That is why we need a plan that actually puts the right infrastructure in the right place with the right type of generation attached at that point.

Q41 **Chair:** Who should carry the cost of constraints? Should that be borne by the customers, the retailers or the transmission operators?

Dr Golby: Ultimately, at the end of the day, everything is borne by the customer. That is a fact of life. Whether it is through taxation or their energy bill, the customers—your electors, my consumers, if you like—ultimately have to pay for this.

Q42 **Chair:** Do you see any rule or things being approved if we move to, as has been mooted, a zonal market structure, rather than one price fits all?

Dr Golby: There are arguments that say that could improve the situation. If I refer back to one of my opening points, we have to take our people with us. Zonal pricing can appear to be a postcode lottery if we are not careful. We have to deal with what is practically going to be acceptable as opposed to what might be a perfect solution in an ideal world.



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Q43 **Chair:** Should zonal pricing not bring prices down from Surrey to Sutherland—I like alliteration—for customers everywhere really, so your customers, our voters, and the losses are then the changes in the constraint payments, which are going to large energy firms? So the customer and the voter wins, but the large energy firm loses. What is there not to like?

Dr Golby: There is a lot to be said about zonal pricing, but we have to look at it in the round and in a way that is acceptable to the consumer.

Q44 **Chair:** The door is open for zonal pricing.

Dr Golby: One of the things this new organisation has to do is look at a whole variety of options, put robust data and arguments around them, and then present those options to Government in terms of what can be done.

Q45 **Chair:** When the options go to Government, should the decision be a political one or an economic one? This is a difficult one, I understand, so I am looking for a general philosophical answer from you, not a specific one, and I realise things will change in time.

Dr Golby: I do not think it is possible to divorce the two. At the end of the day we fortunately live in a democracy. These difficult decisions, I am afraid, come back to politicians to make the final decision.

Q46 **Chair:** Yes. We could have many complaints about the type of democracy, from first past the post to the House of Lords, but I will certainly leave that one there.

Talking about connections and solar, there is a lot of concern about large solar being built where the grid can accommodate it, rather than where it can or maybe should go. Is it a NESO job to oversee things like that—where things are located and how things happen?

Dr Golby: That comes back to the point I was making about the spatial plan. It is to really work out what type of generation should be connected and where it should be connected. It is obviously too early for me to have a definitive view on that.

Q47 **Chair:** That is fair enough. It is in the area that we will know about next month or next year or something like that, which is very understandable in the job.

Constraint payments are projected to rise in years to come. Should NESO have targets on constraint payments of reductions, or holding them static, or any particular policy or any way we could measure success in that? Or should energy firms expect the lottery win annually?

Dr Golby: Going back to basics, constraint payments come about because of the mismatch between the grid infrastructure and where the generation is operating. A prime function of NESO is clearly to eliminate that mismatch. It is just too early for me to have a view on setting targets. There is also the possibility that those constraint payments are



not only an economic cost but an energy waste, because we are not using energy that is being produced.

Q48 **Chair:** Zonal might help by reducing the price.

Dr Golby: Yes, of course, but we could also potentially look at some of that energy-producing hydrogen as another energy vector. That is another route that we need to look at.

Chair: That is a fair point.

Q49 **Derek Thomas:** I am from a slightly different background to you. I am from a construction background rather than an engineering one, but the skills bit is something that I am getting quite obsessed about. We are constantly told that there is a skills shortage in the sector that you are going to be taking on at NESO. What do you think your role or the role of the NESO will be to try to address that?

Dr Golby: It is not in the remit of NESO. I do not think NESO will have the levers to address it. All one can do from that perspective is through individual role modelling. I come from a working-class background. I was the first in my family to go to university. One of the roles I have had previously was to chair EngineeringUK, which is to encourage young people to go into engineering. I am currently on the board of a charity that does something very similar.

We need a massive push in this country to persuade young people that engineering and science-based subjects are an attractive career. This is a personal statement, but I personally regret the demise of the employment service that used to work in schools to do this. We all have a role in industry to try to encourage people into these skill-based subjects.

Q50 **Derek Thomas:** That is fantastic. If I would take up your “thin conductor” analogy, you are conducting this massive masterpiece of energy music in the country. It is going to be annoying for you if you have loads of tambourines and no triangles, is it not?

Dr Golby: I am beginning to wish I had not used that example. Yes, of course, and it is a major problem. The UK is not unique in this journey, and a lot of the equipment we are going to need to fulfil the task will currently also come from overseas. There is a world shortage of these skills. I just go back to my previous point: we need to do all we can. I know the Royal Academy of Engineering and other organisations are working very hard on this, to encourage our young people that careers in engineering and technology subjects are a fantastic opportunity.

Q51 **Derek Thomas:** We recognise the role, as you said, of these kinds of representative groups, universities and the industry to drive the skillset. When you meet with the Secretary of State, while I appreciate it might not be an area of responsibility, presumably it is an area where you could apply some thinking expertise and maybe gentle pressure?



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Dr Golby: Providing advice to Government comes with our role. If the advice is, “We cannot move at the pace we need because we do not have the skills”, that is clearly an area where we can leverage our expertise.

Q52 **Derek Thomas:** My next question is about the fact that there are a lot more men than women, but you have addressed that already—or, rather, Vicky might have addressed it—so I am not going to touch on that one.

Dr Golby: If you set out to attract females, you can do it. You just have to actually set out a plan to do it.

Q53 **Chair:** It was quite impressive that you said that at Costain, where you were, 50% of the graduates—

Dr Golby: Yes, 50% of our graduates were female.

Q54 **Chair:** 50% of the graduates that Costain took were female, but the 50% emerging from higher education institutions were not female, I presume.

Dr Golby: No, it is much lower than that.

Q55 **Chair:** You had positive discrimination there within Costain.

Dr Golby: We did not have positive discrimination—i.e. in setting targets. That is not the right way, but we positively discriminated by setting out what we were doing. We described Costain very correctly: that our objective was to improve people’s lives through the work that we did, and that attracted an awful lot of female engineers to the organisation.

Q56 **Derek Thomas:** Going back to your point about careers fairs and the role of schools, particularly primary schools, the battle is in allowing both boys and girls to see what is available and possible, and that there should be no gender encouragement in any particular way. I meet boys and girls in schools, and they just see the opportunities that are facing them and want to grasp hold of them. I do not think they see the gender issue in the way we do, which is positive for the future.

Dr Golby: We tend to turn young girls off engineering as opposed to turning them on. Young people are agnostic to this.

Q57 **Mark Pawsey:** Following the point about skill shortages, you said earlier that you felt that the organisation would need to double in size and you would need to recruit a further 1,000 to 1,500 people into the organisation. I have two questions. First, given the skill shortages, how are you going to find those people? Secondly, have you negotiated an increase in the budget with Government in order to employ those people?

Dr Golby: It is not going to be easy, because, if we are going to do this role, we need to attract some of the brightest and best people.

Q58 **Mark Pawsey:** It is not “if we are going to do this role”; you are doing this role.

Dr Golby: That is not until I am appointed, of course. You have the authority on that.



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Q59 **Mark Pawsey:** You said “we”.

Dr Golby: If I am appointed, it will be a key focus to recruit those people. We can already identify some of them; for others, it will be more difficult to find them. One of my roles in chairing a body that is arm’s length from Government is to make sure that we set the right environment and the right pay structure to attract those people.

Q60 **Mark Pawsey:** Have you discussed the question of budget with the people who interviewed you for the job? Are they ready for you to double the cost of the organisation?

Dr Golby: I am not suggesting we are doubling the cost.

Q61 **Mark Pawsey:** You are going to double the number of people. Who is going to pay?

Dr Golby: The budget for the organisation is overviewed by Ofgem. Clearly, I am not part of the organisation yet, but the budget, as I understand it, has been put to Government and Ofgem. My assumption at this point in time is that the budget is there to recruit the necessary number of people.

Q62 **Mark Pawsey:** The budget accounts for this additional doubling.

Dr Golby: Yes.

Mark Pawsey: We have the Minister later. We will have a chat with him about that.

Q63 **Vicky Ford:** Have you looked at the budget?

Dr Golby: Yes, I have.

Q64 **Vicky Ford:** I want to go back to Derek’s point about skills. You are going to be employing maybe 3,000 people in this sector. You are the conductor at the centre of the entire energy industry in the United Kingdom. We have talked about skill shortages and you have said nothing about your leadership. You have said nothing about, “I want to take on apprenticeships. I want to train my own. I want to encourage the sector that I am conducting to lead this and I want to lead this”. You have just said, “I am going to have a difficult time recruiting the people I need”.

Dr Golby: No, I beg to disagree. I said that in my chairmanship of Costain, we very clearly set out to recruit some very good people and very diverse people. I will use that same approach in this new organisation.

Q65 **Vicky Ford:** What is your vision for training and recruiting, not just as the conductor of the entire industry, but what you do within your own organisation? Where is the vision?

Dr Golby: To answer your colleagues’ questions, we need to encourage more young people to come into the engineering sector.



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Q66 **Vicky Ford:** We know that. You are the conductor.

Dr Golby: We do that through some of the mechanisms we already have. I personally go into schools and talk to young schoolchildren. I know that there are ambassadors in the ESO currently that do that. We work through the engineering organisations and try to explain the real benefits of young people coming into this skill base.

Q67 **Vicky Ford:** How many apprentices are currently in the organisation?

Dr Golby: I do not know the answer to that. I will have to come back to you.

Q68 **Vicky Ford:** Do you want to double them, triple them or quadruple them?

Dr Golby: I do not know. This organisation does not exist at the moment.

Q69 **Vicky Ford:** Do you like apprentices?

Dr Golby: I absolutely like apprentices. My grandson is about to become an apprentice, so I absolutely support apprentices.

Q70 **Vicky Ford:** Would you like to have an apprenticeship programme in the organisation?

Dr Golby: Absolutely, yes.

Vicky Ford: We need a bit more vision. Challenge this, because you are going to be the visionary person. That is what we look for in a chair. I want to go on to data—

Chair: You might want to respond. Sorry, there was a question about vision. For fairness to the witness, do you want to respond to that?

Dr Golby: Yes, absolutely. The organisation does not exist yet. Allow me to move into the organisation if appointed, and perhaps you will invite me back to a future meeting of this Committee to take you through that.

Q71 **Vicky Ford:** You promise you will paint us this vision.

Dr Golby: I promise I will paint that vision in multicolours.

Q72 **Vicky Ford:** I really want to talk about demand, because so much of the market depends on trading and predicting future demand. Is the data good enough? Do you have access to the basic data that you need? Do you need more transparency?

Dr Golby: The honest answer is I do not know. My presumption is that there is some good data. Is it good enough? Possibly not. The whole industry needs to move, if you like, from an analogue world into a digital world. There is a major piece of transformation that needs doing to provide a much stronger database for the reasons you just said.

Q73 **Vicky Ford:** What is your view on transparency of data? This is a



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commercial market, and data can be a really important commercial secret.

Dr Golby: Demand data is public property. I see no reason why demand data cannot be shared, in the same way that in my current role, anybody can click on their phone and look at any flight anywhere in the world. That data exists, and that is the sort of digital data that we need in the energy sector.

Q74 **Vicky Ford:** I like that you have been talking about demand, because we often end up talking about supply but not about demand. Do we need to have a much greater focus on energy demand?

Dr Golby: Yes, because it is in everybody's economic interest to use energy more efficiently and to use energy at times of the day when it is cheaper to produce. It is a win-win, if we have the data, to use that to reduce people's bills.

Q75 **Vicky Ford:** I also like that you have talked about bringing people with you. Sometimes when we talk about telling people they need to manage their demand, it feels a bit like it is a clunky diktat. There are some people who are very energy-poor; to them it sounds like you are telling them to not warm their houses and not get the lights on, but others of us are just burning through data on our phones all the time and exploding our demand. Tell us more about how you bring people with you on this journey about demand.

Dr Golby: We cannot and should not tell people; we have to find ways of encouraging them. Going back to your previous question, we have to provide the data so that it is as easy as possible. Just walking in the queue this morning coming into the House, virtually everybody in the street was on their mobile phones. We have to make it as simple as that, so that people can make very simple choices with how they use energy, in the same way they make choices in how they use data on their mobile phones.

Q76 **Vicky Ford:** Should there be a better differentiation in how we manage demand for electricity and how we manage demand for heat?

Dr Golby: Both can be the same, of course. My house is heated with heat pumps; that is electricity. We need to get the right balance. Again, it is something that we need to look at and maybe advise Government. Most of the environmental tariffs at the moment, of course, are placed on electricity as opposed to gas. That is quite understandable, because gas is not available to people in some remote areas, but we need to have that cross-energy vector so that we can look at both together.

Q77 **Vicky Ford:** I just have a quick question about infrastructure. My constituency of Chelmsford is mostly urban, but a couple of fields outside my constituency boundary were going to potentially have this huge set of pylons that are going to run the whole way along the east of England. Most of my constituents are not contacting me to say they are worried



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about this. They are just using their own electricity.

For the constituents whose houses face onto that, some of them care like billy-o. In areas of the east of England where these are going to go running across, some of those communities massively care about this. If we do not have those, we will not have any electricity. How do we bring people with us? How do you have the communities that are going to have the new infrastructure feeling that they are being fairly compensated for the demand being used by everyone else?

Dr Golby: There is no easy answer. If I use my aviation experience, the vast majority of people want to be able to fly on holiday but very few people want aircraft to fly over their homes. It is very difficult to match those two differences. The only way we can do this with local communities is to look at some form of community payments to compensate communities for housing infrastructure that they do not directly benefit from. The French do this quite well, albeit they have a lot more land mass to do these things than we do. Community payments has to be something that we look at.

Q78 **Vicky Ford:** Would it be payments or cheaper electricity?

Dr Golby: It could be either/or.

Q79 **Chair:** I have a question that goes back to the constraint payments that we were talking about. Derek Thomas probably gave me the in when he mentioned triangles, because there is a bit of a trilemma around that in terms of where resource is—the wind is blowing or the sun is shining—when it comes to renewables. We have the generational assets, which typically have to be where they are. We then have the transmission assets, whether they are interconnectors or transmission cables.

Therein lies a difficulty with the constraint payments over a period of time. There might be one point in time where you say, “We have constraint payments now”, but in a few years’ time you might manage away those constraint payments by changing the balance of the last two of those assets. You cannot change the initial renewable resource. I just wanted to hear what sort of thinking the organisation might have around that.

Dr Golby: It is very early for me to tell you what the organisation thinks at this point in time.

Q80 **Chair:** You can give your own preliminary thoughts.

Dr Golby: Constraint payments should be minimised wherever we can, and that is getting the right generation with the right infrastructure. It is only there because we have a mismatch at the moment. If we can get the right spatial plan—it is back to my point about conducting the orchestra—then those constraint payments will diminish quite dramatically.

Q81 **Chair:** We are coming to the end of this. When do you formally take up



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your position?

Dr Golby: Subject to your approval, of course, I understand I will become an adviser to the Department in a month's time or something like that. The current plan is that the organisation will come into existence sometime over the summer. That is the latest advice that I have from the Department.

Chair: Thank you for your time this morning, Dr Golby. I wish you well in the projected role that you are due to be in. We have certainly enjoyed this morning's exchange. I am particularly grateful for your offer of coming back to the Committee at some point when there is more singing and dancing, and when there are more triangles and tambourines or whatever, and whenever the thin conductor is in full operation of that all-singing, all-dancing band. That is it for this morning. Thank you very much for your time.