D.E. CONSULTATION RESPONSE – 2

Chapter 2 – Exemption Limits:

Q1: Protection of Customers

This splits into two separate situations – one where customers are supplied by private wires – the other where they are on the licensed distribution network.

- If they are on the latter then they have the choice of changing suppliers – unless bound by contract which have to be issues none of us can address. There could however be a regulation that invalidates any such contract as being 'uncompetitive' if it had too long a life.
- It is much more difficult if they are on private wires especially if they are domestic customers. In this case I am already acutely aware that such customers can be hooked into a 'price uncompetitive' situation which appears acceptable to start off with, but degrades into a situation where the (monopoly) supplier starts making excess profits. If domestic houses were legally or physically locked into an uncompetitive energy contract it would necessarily reflect this into the market value of the houses!
- Defining a legally acceptable price would be quite difficult, but it is very important that this issue cannot arise. As generators will normally not be able to exactly match supply with demand there should be a legal requirement for them to be able to 'spill' to the local network, and if there are network connections then customers could choose to change supplier.
- There is another substantial reason for there to be connections between private and public networks. In the future (when carbon is properly priced) we may need all the lower carbon generation to be freely available so we need to examine the case for such connections to be mandated even if not used.

Q2: Multiple sites

As the energy majors have vertically integrated by using different subsidiary companies to take on different activities normally regulated against, it seems sensible to allow Companies to operate numbers of sites. If they comply and provide the services we all want then why not?

Q3: Exemption Limits

Before tackling this question I need to be clear on the ROCs issue. ROCs are there to incentivise renewable generation and are financially a healthy incentive. By themselves they should have created a much bigger market than we have, but this has been held back by the major issues of regulation, administration and risk management. I am getting very conflicting information about the conditions required for ROCs to be issued which may depend on being licensed. **IF** the electricity generated has to be sold through a Licensed Supplier (Luke Hargreaves) in order to qualify for the Rocs, then no amount of variation in the Supply Licence exemption limits is going to make any difference. Losing the Rocs has an enormous impact on the profitability (which will enormously affect how fast this will expand nationally) so cannot be contemplated. If the ROCs will attach to the **generation** of zero carbon electricity (as I assume was intended) then the licensing does become an issue. Taken individually:

- The exemption limit on generation is not too difficult as it is though I can see no reason not to raise it to 100MW. Personally I am expecting to drive up through the 50MW barrier but firstly we will be much bigger by then and better able to cope with whatever is required and secondly it is likely to be possible simply to operate as a different 'Company' in order to avoid breaching the licence exemption limit. Many communities are going to account for more than 50MW.
- Supply licensing limits are generally as above but I am of the opinion the Cooperative approach I am trying to use does require different treatment for a very good reason. Much of the body of regulation is driven at protecting the customers but with a Cooperative the customers own the supply route – and in this case the generation as well – so they are perfectly protected and much more so than any regulation you like to make. Removing the need for customer protection seems to me to remove many of the issues so I would welcome a radical re-think for this application. Here in Stroud we may even be heading for 80MW (that is also the view of the strategic officers in the local Council!) as we are going to try to generate for ourselves. Clearly we need to address the balancing and trading issues but this is a Licence question.
- Distribution Licensing is not my forte.

Q4: The 2001 Class Exemption Order – fails quite badly to cover the project in mind here – but it wasn't drafted to do so. Given the penalties for operating without a Licence if one is required are so high, it behoves the authorities to make clear in the Exemptions Order whether one is needed or not. To suggest it is down to a legal 'interpretation' of the Order is unhelpful as clearly more than one interpretation is possible:

- Working through with BERR (Chris Chown) we discovered there is no definition of 'A Generator' which can be very important when considering the Supply Licence exemptions! Does one turbine = one generator or could a farm be construed as one? One proposition (already put to you in some detail) is that each turbine is owned by a different Cooperative so the power from each is identifiably and legally different. Chris asked if all the turbines would be connected with the same wires to the same connection point – to which the answer is yes – but so what? It is eminently possible (and could well happen here) that a commercial business would share the same site, in which case we would share the infrastructure and all the power from all our turbines would go down the same wires. We would be metering separately and dealing separately so using the same wires cannot define 'a generator'. It seems to me (I have some legal training) that ownership defines it so if each turbine is a separate legal entity then each is a separate generator.
  This is important if we are operating under the Supply Licence exemption.
- Further, it is not 100% clear whether under the regulation we are even supplying to consumers at all. If the consumers ARE the generators then surely we are simply transporting the power generated (I understand the imbalance issues) to ourselves. 'Consumers' under all other meanings in the regulations refers to customers, and if we don't have a Supply Licence then we don't have under any circumstances to even contemplate supplying to others (customers).

Chapter 3 – Wholesale Market Trading:

Question 4 (again): Using the BSC to cover DE schemes

No I don't. By definition the BSC is controlled by the oligopoly members who will not voluntarily make access to the markets simpler for new entrants. It is in their best interests to make entry as difficult as possible, so if this route was adopted you can be certain any modifications would be slight and would take ages to implement.

Question 5: Funding a DE representative on the BSC

Absolutely not for the reasons given above. This route is destined simply to delay the wider adoption of DE.

Question 6: Any other options?

As long as we have a system where generation is controlled by a very limited number of huge players, small ones are always going to struggle to gain a fair price and to find any way through the maze in front of them. As a prime example (which annoyed me) I was offered a lower price for a 3 or 5 year sale contract than I was for a one year one. Now all those professionally in the energy market are incompetent if they do not understand 'Peak Oil' and the implications for future energy prices. While they will periodically oscillate a little due to political, weather and seasonal variations – the only way is up until the global economy crashes to the point where global energy demand decreases. It is unlikely the smaller energy players we want to encourage into the market can remotely compete with the big players. My solution is to short circuit all of them and either use, or subsequently operate a system that can be big enough and professional enough to both carry the risks and know how to minimise them – in fact play them at their own game. This is an absolute necessity to gain equity and therefore get an appropriate return rather than be fleeced by the market.

The level of activity required needs to be able to support trading under the ½ hr settlement code, which seems to require 24 continuous administration. I asked Elexon about the 'non half hour' settlement system but they didn't seem to know anything about it – in fact they told me it doesn't exist.

Chapter 4 – Selling to Third Parties

Q7: Are sale prices undervalued for small DE?

I would put a great deal of money on it that they are. For my part I wasn't exactly interested in selling the output but invited a few prices to get a handle on the economics. I generated a lot more interest when I said "We are looking at perhaps 18MW or more" to which I heard "Oh, that is interesting and a serious level of generation" and even more when I said it was from wind as they wanted the ROCs.

We have to differentiate between serious or professional small players, and those who want to be involved for altruistic reasons without necessarily understanding what they are doing. This is particularly relevant for micro generators who seem to have the ability to totally ignore economics and financial returns when investing so I doubt they have a serious ability to value the market or fight for a fair return. As above, what may seem like an acceptable price at one point in time may with the benefit of hindsight be found to be taking the generator to the cleaners and this is very bad for a number of

reasons. It is the generator that is investing large amounts of capital and creating the capacity, yet under these conditions it would be a trading organisation with little capital invested that was creaming the profit. I am not aware of any altruistic Suppliers in the market though I suspect GoodEnergy is as close as it comes to that.

They gave me the following estmate which must remain confidential.

[redacted]

Taking account of the values I was given, and assuming I understood correctly that they would all be credited, it still leaves the return – at today's values – maybe about £15 - £20/MW.hr below full market (compared with Smartest Energy's figures just received). Taken to a 5 year time horizon I dread to think how undervalued it would turn out to be. I would stake a huge amount that as a generator we would be receiving a 'just covering' return while the trader would be making £m's. And that is with GoodEnergy that I expect is one of the better traders.

I am therefore in no doubt at all that most generators will be making the scratchings while the Suppliers make the killing, and from information I have received it may be that another Cooperative that is about to generate is actually going to be generating at a loss. This may not be factual but is what I am led to believe, and I also understand they are under a 5 year contract.

Q8: As above.

But additionally we have to get into perspective the value to any mega supplier of buying what to them are insignificant amounts of power.

Q9: not qualified to answer.

Q10: Specialist Energy Trader?

Yes, as they will professionally know and understand the market which small DE operators can never hope to. I am not sure how this varies from what the Consolidator can do, but I will be better informed after I have spent time with Smartest Energy.

Q11: Implementation of an Energy Trader.

I cannot see any way that obliging the Suppliers to come forward with a solution is going to produce a good outcome. I am also not sure that inviting tenders is a good idea as only those from within the industry are likely to tender. Waiting for the market to deliver leaves a void before it happens which I am sure it will. You will have noted that even at project inception here I was aware there would be a need for some professional unbiased assistance to come to the aid of smaller independent generators. I even already proposed that Tranquility Energy Trading could perform this function. I need to get this project underway before I can take a view on what is the best course of action, but everything coming

out of here is intended to be 'working profit' based so effectively altruistic. Costs have to be recovered or I cannot help anybody.

Q12: Interesting and the answer is ABSOLUTLEY YES.

Along with producing the solutions in the Tranquility project I have already addressed this problem and may be in a position to advise within at most a couple of weeks. I had to solve it to make the Stroud Project more financially viable and secure.

Q13: A dedicated DE market?

I do not understand how a dedicated DE market can operate in isolation from the main market. The prices surely have to be the same? If there is a way so smaller generators can trade in safety and obtain a proper reward for the power they generate then I am all for it. I am though of the opinion we need to massively improve the security for the smaller players in the market however that is managed.

Q14: Other options?

Well, maybe not as you haven't directly (yet) considered the Cooperative solution as proposed here – which will happen.

Chapter 5 – Operating as Exempt Supplier on the Licensed Distribution Network

Q16: DE Schemes on private v public wires.

I cannot explain why anyone takes any particular decision but want to strongly observe that we shouldn't be duplicating facilities that already exist. The world's resources are stretched beyond the limit so we need to use every resource we have very fully before engaging any others. I would encourage the removal of any barriers that dissuade organisations from using the public networks.

Q17 & 18: Exempt Supplier Services

From my brief foray into this market I have not concluded that Suppliers welcome any activity that doesn't effectively sweep up all available profit into the Supply Company. I was offered a deal for a Supply Company to buy the power generated but then when we wanted the supply we would have to pay their going rate with a financial 'inducement' being received to encourage us to make our membership sign up as customers. This was then made even worse by the purchase contract they wanted (as previously referred to above) being based on a fixed price for 5 years while the conventional supply deal involved the price increasing along with the market. Decidedly a one way trade from which only the Supplier could benefit – and hugely so.

If we are to achieve the objective of having a big increase in DE (particularly embedded) then there is going to be a very big increase in the demand for such services. It is a constant battle to get the profit to where it should be, which leads inevitably to the view that we need an independent organisation – not trying to fleece the small generators – that can manage this complex interface.

If existing Suppliers could be forced to do this at either cost or some arguably sensible figure then all well and good, but even then I am deeply troubled by the lack of 'connection' between the big

organisations supplying goods or services and the people they are said to be serving. We are all heartily sick of holding onto phones following long lists of options so a Corporation somewhere, unaccountable to almost nobody, can value its time hugely and ours at zero. One of the guiding principles in setting up independent generation is to claw back some of the control we have all lost, so putting it back into the hands of these monoliths is hardly achieving the objective, and I can see many people getting very cross when they cannot get access to their own 'goods'.

I welcome the suggestion that they be mandated to supply the service but somebody somewhere is going to have to offer an alternative.

Q19: Services at cost

Yes, decidedly this can be a good idea and my discussions with Smart Energy are along these lines. Different 'small generators/suppliers' will have different facilities to provide different parts of 'the total service'. For example, I am chasing a sensible price for smart meters which for this project would have substantial benefits. Not only would we know an individual's electricity consumption without reference to meter reading or estimation (a permanent issue), but we would have access to it measured half hourly – which you will understand from my document 3. Further using the model I am working on for the Billing System it is incredibly unlikely there will be more than a smattering of credit issues and potential bad debts, so we can remove some reasonable costs from the system. Taken to the limit it can be that only the balance trading needs to covered, along with the legal compliance of having a Licence. In this format the Supplier is providing very little administration so hardly any overhead is being involved.

Q20: DE representation at Energy Network Association.

Yes! Central Networks have so far been very helpful but that is while dealing with the people responsible for integrating embedded wind onto the network. That said, I am the one who has traced all their lines and deduced the optimum point for the connection and the voltage to tap into – though guided in principle by them. I am used to being given quotations by organisations when I ask for them, but in this case I was greatly surprised to be told I actually have to PAY to get a quotation! I understand they have work to do to produce a quotation but they should be being pro-active and providing this for free. I don't even have a guesstimate! If we are trying to increase the amount of embedded generation then the Networks must be prepared for this, and while I understand they may not wish to spend copious amounts of time and energy producing quotes for projects that could never see the light of day, they have to be able to identify a serious enquiry when they get one. In this case it will be a 33KV input to a 33KV overhead line on a wooden pole (easiest for them) within 4.2 kms of the sub-station and 7.5 kms of the market. Now that cannot be that difficult and the biggest issue is likely to be any one-way switchgear on the supplying end of the sub-station! So could they be encouraged or required to be more directly helpful?

The question also arose about the transportation cost of the electricity when input as and where we agree it should be. In reality the power inserted here is going to displace central generation that will be being generated a very considerable distance away, so it would seem to be a net gain for everybody. In these circumstances we will be doing Central Networks a favour as they will not be having to transport

the energy we displace from the central generator and won't have to transform it down through 132KV to 66KV and then to 33KV. There is a small possibility some could have to be transformed back up to take an excess away, BUT NOT if they put maybe a 100M 33KV link in so the power can go direct into Stroud. With this maximum modification ALL our power will be displacing long distance power AND will only be being transported a few kilometres at most. Not only will the power be saved but also all those line losses! So I feel they could be much more welcoming and actually ASK how quickly we can get powered up. I am not sure why we have to pay any capital at all, and maybe even not a transport charge though this has been verbally estimated at a maximum of 0.133p/kw.hr.

This 'lucky' connection could not apply everywhere so there may need to be some averaging out as the turbines need to be where the wind is having little regard to the network access.

Q21 & 22: Tech Standards

If you haven't seen an 'Application for Connection of Generation Plant' then I think you should obtain one. I have one here. I am far from incompetent – even electrically – but am stunned by the complexity and quantity of the questions. I am not doubting the validity of them but need to find someone with a BSc in Network Connections – and I don't think I have ever been in that position before. No doubt the generator manufacturer can provide most of the data but there is a lot of it. I do feel they could be a bit more helpful, unless this is another obstacle put in to sort out the serious from flippant enquiries.

I think the notion of Virtual Private Networks is probably what I am alluding to in most of my thoughts.

Chapter 6 – Becoming a Licensed Supplier

Q 23: Costs

If the London Climate Change Agency have their figures correct then for a wind farm the additional costs are between about 0.21p/kw.hr and 0.07p/kw.hr to become a Licensed Supplier as the RO costs are then zero. These don't seem to be prohibitive costs if we are trying to deliver our own generation to ourselves, but even the 0.21p requires about 4 large commercial turbines in a farm which require £10M of investment so we are dealing with large figures by most small DE standards. Yet again it would seem that these smaller schemes need to be part of a bigger overall organisation (of which they could be members) in order to make it viable, but this is also a requirement to achieve administration costs that are containable. Most small DE schemes (say less than 5 to 10MW) are going to struggle to handle any of these issues on their own and could be expected to be frightened off in the early stages.

Q24: CHP versus boiler only

Sorry, I am sure I am on my own here but CHP and I don't go together. I do seriously understand CHP and can see that under perfect conditions it is possible for CHP to save a little carbon, but personally I cannot engineer a situation where this applies unless we have a swimming pool or some such requirement for surplus heat. It was interesting to note that in Denmark they appear to say their schemes DO NOT save any carbon, and all the figures I have ever seen avoid the heat losses from the

heat distribution. If you have ever been in Copenhagen in winter you will have see steam rising from the pavements all over the place, and all this is lost energy counting against any saving that might be being claimed. At the end of the day I am not looking for solutions that save some %age of our carbon but that necessarily still have to emit a lot. Those are not solutions I am comfortable with.

Q25: Lock in customers for 5 years.

I don't like the principle of locking customers in. If the scheme is viable it is viable and the prices charged are going to be competitive so there will be no reason for customers to leave. If the pricing causes them to want to leave the scheme shouldn't have got off the ground in the first place.

Q26: starting information and advice

There is a dirth of information for would be generators as it is all directed at the professional market and big players. I intend writing some guidance documents for anyone interested in following in our footsteps so they can simply understand how such schemes can be set up; what they can achieve; what are the hurdles etc. This will then be followed by a more detailed (but still brief and comprehensible) document if people want to take it further, after which they will be able to decide if they wish to pursue a project, and if so which parts they can handle and which they need support or help with. At least when I do it I will write it from the perspective of the new entrant so the questions I think they are likely to have will be addressed.

Q27 & 28: a new DE licence.

May I reply on these two tomorrow as I need you to receive this by your deadline which is in a few minutes time.

Mike Hillard.