

Fosse Green Energy_ISH1 _Session 2_06.01.26

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SUMMARY KEYWORDS

Fosse Green Energy, battery storage, grid connection, solar panels, technical note, land area, panel efficiency, energy independence, cybersecurity, renewable energy, planning system, heritage officer, land use, module efficiency, energy demand.

SPEAKERS

Speaker 13, Speaker 9, Speaker 15, Speaker 8, Speaker 14, Speaker 5, Speaker 1, Speaker 10, Speaker 11, Speaker 3, Speaker 7, Speaker 12, Speaker 6, Speaker 4, Speaker 2

Speaker 1 00:05

But it's just gone 20 past four, so the hearing is resuming, just turning quickly to North kesterman

00:18

and council or Mrs. I is from black people want to call you

Speaker 1 00:28

fellows because I worked on another case and there was a Marianne fellow, and you're not fellows. Overton was a discussion over the break to sort out the title issue? Yes.

Speaker 2 00:44

John Hunter on behalf of Norfolk student District Council, yes, I understand there has been a discussion and there's been consultations with others in the council. I think the feeling is for the reasons given previously, for the avoidance of confusion, the preferences for misses. But I quite understand the council that the council misses allows position as well, but the view that has been conveyed to me is that the misses is a more appropriate form of address to avoid that confusion.

Speaker 1 01:19

Okay, I think we'll progress on that basis for the rest of the afternoon, hopefully overnight. If Mrs. Thompson is not content with that, she can speak with others and your and get it resolved overnight.

01:33

I have differing advice from different councils. Thank you.

Speaker 2 01:37

So there was one of the points I just wanted to raise, in addition to those mainland Mr. Hunt, if I may, on the on the matters you were dealing with before the adjournment, yep, and it was, it was the disappointing that rises in relation to the information we were given by the applicant after lunch regarding the connection of the the battery storage being a gate one connection, I think that therefore implies there is some uncertainty as to whether and when such a connection will be fully consented. I would just like to flag up that in the statement of need document a P, P, 184, paragraph, 7.571, of the justifications for the over planting that's given is that CO locating a PVC, sorry, PV installation with a

Bess allows for electrical generation in excess of the grid connection, ie that energy to be stored for later supply into the grid. So that is a benefit that is relied on for over planting. Well, obviously that is potentially affected by uncertainty as to the connection to the battery storage. So the picture on benefits and disadvantages may be affected by that, and I so appreciate you requested a more detailed note to explain the position regarding connection generally. It may be that the applicant wants to address that, and we could then comment on it

Speaker 1 03:40

just before I ask Lincolnshire to comment on the applicant summary case, North Kesterman, have almost guessed what was likely to come through some of my questioning once we've been around the table, I think it will be useful for some of this sort of technical type information. And it does appear that perhaps some documents within the application say one thing, and other documents have to say another as if we can have a technical type note that deals with all these technical bits and pieces, and it's all in one place, so that all parties are just viewing one document, and that includes the examining authority. I've used this approach on other cases as a general depository for such information that would potentially then enable the applicant to review the documents, to check on over planting what's being said relative to fixed versus the movable panels, the numbers of panels, and various things like that. So when I get some my questions, some of which I will not, not, now not be asking because of what's been covered in the summary. But there may be some points that I'll ask to be included in technical note post hearing, and that that technical note potentially will evolve during the examination, because sometimes, certainly, when I've had this previously, I've seen the note and been asked, perhaps for further information and or parties raised something that results in some amendments being made. Is that something that the applicant will

Speaker 3 05:37

be Reuben Taylor, on behalf of the applicant? Yes, that is something we can do, although I know that Mr. Snedden is keen to explain some of the points in relation to the matters raised this afternoon by NKDC. Today, he's got the information.

Speaker 1 06:00

So if we before Mr. Snowden does that, I think we'll look at Lincolnshire County Council see whether they've got any issues, because some may be about the covered in by Mr. And there may be some new points that he'll need to add to whatever, but just to avoid too much ping ponging and to try and keep some semblance of order in terms of other parties attending the hearing of is there much that anybody else wants to raise in respect of the applicant's opening summary? The only reason I raise it as looking at the time, we're now half past four, I understand we'll have to draw things to a close at five o'clock, and I just want to get a feel for where we might be as we approach five o'clock. So we've got quite a few hands. It might be that we only get as far as hearing what parties want to say on this point before I start raising questions tomorrow, that then gives me time overnight to review the questions. And it may be some questions that I was planning to ask I won't need to ask, and there might, on the other hand, be other questions that I will need to ask. I kick, yep, if we go with gentlemen the front first. Oh, sorry, we're out of order. I was going to ask Lincolnshire County Council first.

Speaker 4 07:36

Thank you, sir. Justine Foster for Lincolnshire County Council, I don't think this is going to take too long. From our perspective, we haven't got a lot more to add to what's already been expressed by North Cabin District Council, and certainly the suggestions made by yourself, sir, in terms of providing information our sort of point we were sort of looking to bring forward, and this is also expressed in our local impact report is we were seeking that greater clarity regarding the relationship between the three

key elements of the scheme, the grid connection, the bus and the generating capacity, the solar arrays, and we felt that understanding this relationship is going to be essential for the consideration of associated development in line with the relevant guidance on that. And I think we do understand, we have a better understanding. Thank you to the applicant for presenting today what they've done already. And we do our understanding of the best to the 240 megawatt connection is understood being a two hour system, and we're not raising an issue with that as such, but I think we are less clear on how the solar output to the 240 megawatt grid connection relates, and we would welcome that clarification, as you've suggested. And we also note the questions that are set out by yourselves in the draft set of questions that have been published, particularly gc 1.07 and gc 1.08 and we would welcome the opportunity to review any responses to those questions if they come through in the final set are published, and also I agree that some of this information is quite technical in nature, so it can be quite difficult without technical expertise in the room on our behalf, to respond to some of these points today. Yeah,

Speaker 1 09:53

I think then moving on to other IPs, yes, sir,

Speaker 5 09:58

thank you Chair. I. Carl Kern and Thorpe on the Hill through you could I just ask for clarification from Mr. Snedden on the figure of 460 hectares that he gave in his presentation, that this is solely for area within the project development for solar panels, as opposed to cable corridor, etc. Thank you.

Speaker 1 10:22

Certainly that was my understanding that Yeah, Mr. Snowden, while you were handing the mic back, has nodded yes, the array areas for 60 hectares. Do

Speaker 6 10:45

I was thinking. Just wanted to pick up on the way the capacity of these or this solar farm is expressed all the time. It's very annoying, because the capacity is always expressed in megawatts. And I mean, that's the way the industry does it, I suppose. But the industry's always done it that way. Because a megawatt, or if you're comparing a solar farm, say, it produces 100 200 500 megawatts, or whatever, there is a tendency for people to think that is comparable with, say, a traditional power station, nuclear, gas fired whatever, which typically runs 24/7, and of course, we know, and he said the load factor, load, load factor up about, say, 10 and a half percent, three, 11% so you can't really compare a megawatt from a solar farm with a megawatt from a traditional Generating Station. And there's a danger that people do that and they use it in the in the literature, I think in that way, just if we wanted to do some kind of equal comparison, let's say, at the load factor of 10.5% if we were comparing it to a Traditional power station, then that would result in about, Well, exactly 28.57 acres per megawatt, if we compared on a like to like basis. So that's 28.57 acres per megawatt. Thank you. So I

Speaker 7 12:45

thank you. David Crampton, North Coast, even resident, a couple of points I'd like to make about the applicant's opening remarks. First one, he talked about the need to increase the number of installed schemes. We heard one speaker talk earlier about a potential over capacity. I think it'd be very useful to see a calculation of those schemes planned, those installed, and those on any other registers that exist, including nesso, although that is very confusing document, so we can understand where this fits into the overall picture. For the UK, they all talked about they also talked about cheaper electricity. I think that's a misleading statement. Later last, late last year, we were told that bills are going to go up by 100 and some odd pound as a result of infrastructure upgrades. Reduced somewhat by cheaper electricity, but it gave a net increase. Many of the arguments used for homegrown energy in that statement, I

think, could equally apply to food production. You know, I'm not against solar, just solar in the right place, and those arguments apply to things like sustainability, sorry, the arguments regarding sustainability and conflict, changing climate could also equally be applied to agriculture and food production. Finally, I didn't want to stray into policy document, because that's probably not what you expect us to do at this hearing. Expect us to do at this hearing, but the applicant did so I will there are government policies and papers that, in my view, the applicant does not comply with. One of those would be circular economy and sustainable manufacturing based upon where these panels are manufactured and their recycling capability. So my conclusion on that is that we measure carbon in a fairly outdated way, and we don't consider processing, manufacturing and transportation from abroad. And if we did, it might give us a different picture. Thank you for your time.

Speaker 8 14:43

Williams. Mark Williams spring whistle Action Group, yeah, just following up on some things, the applicant said there, one of the things they quote was the need and becoming carbon neutral, etc. And. Let's be becoming energy independent. Currently, the only way this, this, this, this scheme will not make the UK energy independent. Yes, we may move away from gas requirements from, say, Russia, but we will just become dependent on Chinese panels. So again, let's, let's look at the companies behind the the applicant, window energy and recurrent energy, or more precisely, Canadian solar. Let's look at Canadian solar. It's a Chinese company. So essentially, we're talking about Chinese panels flooding the UK market. So we're not we don't become energy independent. We become reliant on Chinese panels, with all the associated risks to the UK economy. We're all we're seeing on a on a daily basis. Now, the risks to UK, the UK economy, and UK industry, because of this mad rush to net zero. And I think from a planning perspectives perspective, we need to be very conscious of that. And some, some of the the regulations or or policies that being put in place are now being questioned extremely hard by many, many political parties in this country.

16:38

Work from the back of the room and come forward.

Speaker 9 16:47

Sorry about some confusion, right? Michael Camden, sorry, yet again, I was very interested in the applicant's comment about they've got the 20 years of weather data. I think it would be helpful if they could translate that into monthly output from the site, if you look at the actual generating data that's published through the official government figures, you take the average for the last three years that are published, solar generation drops by About 85% between mid June than mid December. At the same time electricity demand normally increases around about 40% so in terms of satisfying need, I feel there are better solutions to satisfy the need for electricity when it's at its peak requirement and demand in the country. So if they could translate their 20 years into monthly output to show what the site would actually produce, then that could be considered in the bigger picture of need that they identify that they're going to satisfy. Thank you. Thank

Speaker 10 18:06

uh Barry Smith Northwest, even resident part of the cliff village solar Action Group. And we are concerned that current legislation obviously only partial protection from the sort of actions of hostile geopolitical adversaries, on our national energy infrastructure. Mr.

Speaker 1 18:32

Smith, I'm going to stop you at that point, because that's not really something our consideration that that is for the department and OFGEM to resolve in the regulatory regime that deals with and the aspects of government that deal with trade that is not a land use planning consideration.

Speaker 10 19:02

So yeah, there is a policy that's in place, and it's the 2018 regulation, which applies to generators of bar two megawatts, who are supposed to consider all these cybersecurity issues. And there is a new bill introduced by the government in November which is looking to produce a similar requirement on those sort of FOSS green scale items,

Speaker 1 19:40

but that that will be outside the planning system, that will be under other legislation for for consideration under that legislation, not as part of the consideration of an application made under the Planning Act. 2008

Speaker 11 20:19

Good afternoon again. Yeah, it's Thompson Thorpe on the hill, resident, just listening to the statistics there, we're looking at approximately, I forgive him, I've got this wrong, about around about 500 hectares per farm. You're looking at, what, two a year for the next six years. That's 12 a year times six years, 144 you're looking at 72,000 hectares. So we, you know, that's a massive, I've got the figures right there. That's a massive coverage on solar panels. And it's the way that we're actually going about it, really, if you look at it, if you had a blank canvas, you just wouldn't put them where they're currently being located, around residential areas and impact in the way they are. So that's my thoughts on that, yeah, they need to be careful, more carefully considered with the with the residents, and certainly what we don't want to end up is an industrial landscape scroll instead of the rural countryside that we currently enjoy. Thank you.

Speaker 12 21:21

Stones. If just tell me I'm going to be lost, I shall put my hand up and wait. Thank you for that. Firstly, the first part of the presentation was a piece out of the government's clean power statement, a sort of summary of the drive that's coming from there, and that was has recently been updated, as was said in December, simply with the addition of a picture and a forward from Ed Miliband on Chris Stark's document. The point that I'm getting at is, yes, those are the ambitions. But let's look at the facts of what's actually been happening, which will tell us about the need. And there, what wasn't mentioned was the document from niso, which tells us the recent reform statement. I've just lost the page. Here we go, and that points and I will submit this as part of our submission, and that points out that we are just about met. We have just about met our needs. And that was, that's the connection reform results on the niso website. And I've just checked again and it's not update. It is still there. It's updated every two weeks. So that is there, and I it does demonstrate that we are very close to what's required, and, in fact, well over supplied in some areas. So I do think that needs to be taken into account when we're considering need. The other point that was made is about that the energy doesn't, isn't, is not produced, obviously, at night or when this little sun, so two hours battery will not help when, for long, it's only two hours. So it's not a it's not a big solution to the problems, you know, to providing renewable energy 24 hours a day. And I think the last point I just wanted to pick up is about the importance of making sure that what we do here is correct and that we're not going towards producing vast amounts of expensive infrastructure, which has added 17% to our electricity bills for no purpose. Do these have a switch off for when they're not required, if they're producing a lot of power during the summer, hot summer, when there's no energy required, do they have a switch off to make sure that there's no overheating, producing fires and picking up the points that was made from Mr. Smith? It is actually in policy to some extent, because if you look at the end three, it says a presumption in favor, as long as the other factors the criteria, there are some important caveats there, one of which includes the health and wellbeing of residents. So I do think actually it could come in there, and I think it, I would hope that it might be part of the process. Thank you.

Speaker 13 24:51

Nick Lyons, Chair of Thorpe on the Hill. I'm a little bit confused now. I'm sorry about whether we actually responding questions generally to. Topic 3.1 or specifically, in terms of responding to questions generated as a result of the applicant's statement. So I'm not sure about the timing of my contribution. At the

Speaker 1 25:13

moment we're responding to what the applicant said in opening to this part of the agenda.

Speaker 13 25:20

Well, I that I would prefer them to delay. We seem to just veer it off a little bit occasionally. So I don't have anything to raise with regards to the applicants. I got something general to say on 3.1 but not in terms of the applicant statements. Thank you.

25:40

Tony, turning turning to the applicant. Mr. Snell, I think was going to respond to some points made by North kesterman. Yeah.

Speaker 14 25:54

Mr. Sneddon, on behalf of the applicant, I just wanted to come back on the panel numbers point that Mr. Hunt raised, and this is a little bit around the size and the type of panels that were in the design documents and the numbers I quoted, you're correct. You did use a 670 watt peak module for the numbers that I came up with or I presented, and yes, the other sections of the document do mention a range much wider than that. And just to explain that if you had an 800 watt peak module, it would be proportionately larger in surface area than a 670 unless something remarkable happened in the next five years around panel efficiency. So given that effectively, the surface area increases to get to a larger panel output, the number of those panels that you would be able to fit in the given work, number one would reduce. So the numbers I obviously quoted were what we based a number on to state a number of modules. But that's not a secured part of the application. What we're securing within the design parameters documentation is design considerations, such as the height and the size of the arrays, the land area that they take the clearance from the ground, that would allow for flexibility to have different sized modules within it, but also would consequently have a different sized number of modules, just to make clear that a P, P, 187, the design, sorry, yeah. 187, the proposed development parameters, document that outlines the the secured parameters that the application is seeking to gain. Consent Form. Thank you. Thank

Speaker 1 28:10

I mean, just on that last point, we may touch on this, or perhaps in a few questions that I might get in this this evening, but almost certainly tomorrow. I think it's going to be helpful in the technical guide that we talked about, whether you could perhaps run a scenario you've got your 670 watt panel, which you've indicated, would require something of the order of 460 hectares, if a scenario was one perhaps for something less than 670 I don't know 500 just to see what, what that came out at. And another scenario that was, maybe I don't know 700 or 800 whatever you think might be available on the market, just so that we've got a better understanding, when you start changing one of the parameters, what that does, particularly on land take because I think the natural assumption is, yes, if you use more powerful panels, you can use less land. But that might not necessarily be the case, because the individual panel size potentially has to increase. Mr.

Speaker 14 29:20

Sneden, on behalf of the applicant, I can respond to that right now. In terms of the value that would have to change would be the efficiency percentage of the module. Effectively, a 23% module made this size would require many hundreds of 1000s of modules to cover the area. If it was three meters by three meters, you would have less area, but the cumulative surface area that is module for the same efficiency would be the same. So where. Are within the next five years, if efficiency suddenly jumps to 28, 30% then you would see potential to have a reduced land take for the same installed capacity of solar modules. But I didn't get a Christmas crystal ball for my Christmas so that I couldn't I don't know for certain what percentage efficiency modules could be in the future. However, we're trying to retain flexibility within our design parameters, so that if a far more efficient module comes out that is slightly smaller than what we've modeled on, we would still be able to fit that and then potentially reduce The land take of the scheme. Thank you.

Speaker 1 31:02

And at the moment, what is the finish, efficiency rate of panels, typically, Mr.

Speaker 14 31:11

Stennon, on behalf of the applicant for a silicon solar panel, which is the majority of solar panels that is used for a utility scale scheme, you can get sort of up to around 24% efficiency of the module. So that effectively means 240 watts per square meter of panel area, of module area. And then in terms of the size of modules, they really range from like a 1.8 meters by a meter, up to 2.4 by 1.3 meters. And then there's some talk of module manufacturers going even higher than that in future.

Speaker 1 31:57

And is there any indication of what sort of rate efficiency might improve.

Speaker 14 32:04

So historically, in my 10 or 12 years in solar, I've lost count, module efficiency has gone from about 19%

32:14

up to

Speaker 14 32:15

that 24% mark for our typical silicon solar panel. There is an effective limit of how much that can improve. Part of the way that they've improved from a module efficiency of 19 to 24 is by getting larger. If you have less area that's module frame to cell surface. However, the the viability of different technologies within the solar market, there's still lots of development in various universities and by various panel manufacturers that we may see improvements in panel efficiency. But I think everyone would prefer that an application like this was made on the basis of something that is available and commercially viable for a scheme like this, and that's what we've done.

Speaker 1 33:47

I think certainly for the technical note, some discussion panel efficiency, where that has been, where that is going. What might happen if you use different I was going to say technology, sometimes different types of constituent within because I understand that there's some movement there as well. They won't necessarily always be silicon. As we go forward, there's possibilities and also layering, I think how that if, again, you have some explanation as to how that might be changing, but also the timescales that you you think might might apply to that, whether it's short term or whether we're looking at 10 or 15 years to to see significant changes in in efficiency. I think, given where we are, which is about three or four minutes to five o'clock, this is probably a convenient point to call a halt to. Today's proceedings, and we

then resume tomorrow morning at 10 o'clock. But before I do adjourn, is there anything that anybody particularly wants to raise, perhaps of a more procedural type matter, as we're still sitting here this morning, this evening, looking at the applicant side

Speaker 3 35:26

room and table for the applicant? No, thank you, sir. Nothing from us, anything from the councils.

Speaker 4 35:32

Yes, thank you, sir. It's just really, we've just emailed the case team just to make them aware, but also, as you give them the opportunity, I'll make everybody in the room aware in terms of the gender and the timetabling our built heritage officer who did, did attend this afternoon and has now left. He is only available tomorrow morning to be able to speak on our behalf. I just wondered whether that could be taken into consideration tomorrow morning.

Speaker 1 35:59

And when you say, tomorrow morning. What does that mean? Does that mean up until midday or up to one o'clock?

Speaker 4 36:13

Justine foster for English county council will get clarification on that and email

Speaker 1 36:18

the case to case team today, and is your colleague leading on heritage for just your council, or for North estuven

Speaker 4 36:29

is leading on heritage just for Lincolnshire county council. I understand North Stephen have their own heritage officer in attendance,

Speaker 1 36:42

potentially. Then what we will possibly do tomorrow morning is a little bit of rejigging will conclude this agenda item. And then I think we'll potentially take heritage Next, if everybody's content with that, and then that ensures that Lincolnshire being actively able to participate.

37:03

Thank you. So that much appreciated.

Speaker 1 37:08

Hopefully, well, we'll have a chat with case team overnight that will let English Heritage know that there is rejigging of the order so that they're also available fairly early tomorrow morning. Was there anything from North kesterman on a procedurally type? No, thank you, sir. Anything from anybody else? Yes?

37:45

The microphone is just coming to you.

Speaker 15 37:50

Hello. Gordon cobish Thorp on the hill, resident. We're relying on you, as you know, the residents, to come up with the worth of this scheme or not. But could I ask that all the information is given on standard terms? I mean, we've got hectares and acres discussed here, which is not always familiar. For

example, could could we have values that are commensurate for the for the whole whole setup, please. Thank you.

Speaker 1 38:31

Looking at Mr. Seddon, she looks like he's going to be the author of the note. This was a point that I was going to touch on, certainly in one of my questions, certainly when we're talking about land area and density of panels, I think we're probably going to ask for both hectares and acres. I think the NPS talks about acres, but most of the application documentation is in hectares. I've done some calculations, but we're certainly discouraged from doing math. So I think we're going to ask if the applicant can quote both Is that something that you should be able to do? Then I think those of us who are more familiar with dealing with hectares will be able to keep the hectare numbers, and those more familiar with acres will again understand, but there'll be consistency, but yeah, the MPs talks in one set of language, but forgets that most applicants and perhaps other practitioners are still using hectares.

39:37

Does that help? Okay?

Speaker 1 39:39

Was there anything else? Okay, then issue specific hearing one is adjourned until 10 tomorrow morning. Thank you.