

TRANSCRIPT_ISH1_SESSION2_DRAXPOWER_18012023

00:30

Hello and welcome back to this issue specific hearing on the scope of development. Before we begin, can I just confirm that everybody can hear me clearly? Yep. Thank you. Can I also confirm with Mr. Harold that the live streaming and recording of this event has restarted Thank you Okay. So, moving on to the effect of the proposed scheme on the output capacity of the power station. And before before I ask questions relating to the energy penalty, I just want to clarify something that was discussed earlier. So, in relation to the works to upgrade and modify existing plants, so work numbers one A, one B, and parts of work number one see, am I correct in understanding that these do not increase the potential output capacity of the power plants?

01:38

Jim Doyle, Drax power, no, no,

01:40

they don't increase the output capacity of the existing power station.

01:43

Thank you. Okay. So moving on to the the potential energy penalty. So, Mr. GRIFFIS? Earlier, you referred to the output capacity dropping from its current 660 megawatts to between 450 to 480 megawatts? That's correct.

02:12

Thank you, sir, which gave us a path that begins. So what I said was that the current generating output of each unit will stay at 660. So we're still generate each unit will still generate still generate 660 megawatts. What we'll drop is the output to the national grid at the moment that is 645, approximately 645 megawatts. So 50 megawatts is lost in for internal parasitic reasons how it happened, the power station operates, that 50 megawatts is still required, doesn't go away. So that still happens. But then in addition to that, you then have the carbon capture plant, which has a parasitic load requirement, which means that in Beck's mode impacts operating units one and two, won't be transporting circa 645 megawatts, but will instead be transfer exporting around 450 to 480 megawatts, I think it's important to note that the 660 megawatts of each unit still stays the same.

03:24

Thank you. And just to understand the context of that change in output to the grid, which part of the process is is that energy penalty related to?

03:41

I'm going to avoid getting to the technical side if I'm not an engineer, and we'll pass it to Chris summers for that technical answer. Thank you.

03:50

Morning, Chris was direct with regards the reduced output with BEX in service. As we mentioned previously, this morning the processes require steam process steam for the chemical reaction to be reversed back through the regenerators. So, we take steam from the host biomass unit passes through a combined turbine which will generate an amount of works power for the next process. So, across the backs plant, there is a number of electricity consumers, pumps fans, all related to the capture process. So that reduced output that we would export to the grid is made up from processing requirements and the electrical house load or works power load from the next unit.

04:57

And so in relation to work numbers of the proposed development would could could that be attributed to to one of those work number areas is that would that be work see the generation of power where there is that reduction in the output?

05:24

Yes.

05:30

Thank you and is there is there any energy penalty from Drax to contribute to the transportation of co2 through the pipeline?

05:44

Crystal was Drax again. So, part of that works PowerWorld from the host unit is for compression. So, we will compress the co2 to pipeline specification ready for export. So, that includes the compression electrical load

06:11

so, compression but not there's not a contribution of power to the transportation associated with the pipeline.

06:20

Chris summers from Drax can No, just we only we will compress that it would flow to the requirements down the pipeline from our fence line onwards would be all the sauces.

06:33

Thank you. That's helpful to understand. And before the break, Mr. Hewitt raised the issue of concern of where the shortfall in energy would come from and the potential that this could be reliant on the fossil fuel generating stations anyway. So on fossil fuel generating stations elsewhere, would you like to comment on that point, please?

06:59

Yes, sir. Thank you, Richard Griffiths some half the applicants I think. Well, as far as I'm aware, there's no evidence being put forward to say that that is the likely scenario to happen. But I think my answer is quite straightforward, in that every single module scenario, by the Committee on climate change, for example, and others, in how the country can reach Net Zero incorporates power backs. Every single power BEX plant, whether it's back sets, Drax or another requires power in their modelling, therefore, they have taken into account the need for power to operate these plants. And you in all those scenarios, you get to net zero, which therefore means that it's a low carbon and carbon negative grid. So that's the straightforward answer to it. I'd also add that if you do not to consent backs, then as per our model, assumptions, the likely scenarios in the applicants view is that unit one to four would operate at around 4000 hours per unit. Without mean there is a greater deficit in power going to the grid than if your ad units one and two with Beck's. So you can't have your cake and eat it if I can put it that way.

08:32

Thank you. Is that are there any comments from anyone all questions from anyone in the room or virtually on? On the subject of energy penalty? Yes, Miss Brown.

08:49

And Casey brown biofuel watch. So our position is that we don't accept that biomass is is renewable. But in the framework in which we're working, where it is considered renewable. The energy penalty and the reduction in output to the grid, we think will be incompatible with en one. Could you respond to that?

09:25

What I would suggest I think we will come back to some policy discussion under the needs section of this, of this hearing where we will probably talk a little bit more detail about em one en N three. So my suggestion would be to raise it there because we'll probably have a more in depth discussion in that section. Mr. Griffith So do you agree with that? I'm

09:46

happy that I'll just I can't I can't say any more than what I've just said that. I don't understand the arguments putting it bluntly, because if the argument is that you shouldn't consent backs because of a We're exporting to the grid just under 1000 megawatts just under one gigawatts. Where's that moment? We're exporting circa 1260? And therefore that's incompatible with en one. That doesn't make any sense. When I, as I said, if you do not if capex isn't consented, then the likely operating scenario is each of unit one to four, operating the 4000s. So there is a greater deficit to go into the grid. So refusal would be going against en one. So I can't say any more than what I've answered already in terms of the the difference in the output with and without Beck's. So I'll leave that.

10:38

That's fine. What I would say is do you feel in Forgive me if there is a more if that's explicitly stated somewhere that I don't know to hand? Is there somewhere that you can point us to where that's explicitly written within the application explained in simple terms, as you've just explained it to me there?

11:01

I can't recall off the top of my head. But certainly Now obviously, that was our written summary about all submissions. We'll have to make that point. And I'd also state that what happens on the grid isn't is not in the applicants control. That is down to the national grid and the market and national grid or direct where electricity which generating stations will come on the grid. And when pursuant to demand. And that is a an issue for National Grid, not for the applicants. We are proposing a carbon capture plans that we argue hopefully accords with the not only national policy statements, but the emerging policy statements and policy. For the reasons I've just said, We will fight we will see if we have expressed it in the way I've done so this morning, and point you in that to that direction. If not, it'll be in our written summary,

11:53

that would be helpful because I don't recall it. But if you could point us in that direction, if it is there, that would be helpful. Thank you do Thank you.

12:13

Okay, in that case, we are going to move on to see which is the effectiveness and reliability of the proposed technology, the capture of co2. In the first instance, could the applicant explain in more detail how accurate the assumption is that the proposed development would remove 90% of the carbon dioxide?

12:36

I think it's nice. It's approximately 95%.

12:39

Very near 95 95%.

12:44

I will turn to Mr. Steve Foster, who is the environmental regulatory manager at Drax to go into detail.

12:56

Steven foster Drax power, Drax at the start of this took a pretty broad view of carbon capture technologies and undertook quite a lot of work looking at all the different technologies available, including making our plant available to various technology providers to test their equipment, some of it fairly cutting edge. And from that sort of initial review of all the technologies available, we looked at reliability, how mature the system was its effectiveness at capturing the carbon. We, as a company came to the decision that in the current technological environment that AIMIM best solution was the most appropriate in the current environment. And from that, that a proprietary Solden blend was probably going to offer us the best capture efficiency out there to achieve the 95%. And coupled with that, we've also been looking at how we manage our horse units, the comparability, the maturity what plant were out in the in the world doing this sort of technology that was all assessed which landed us this morning, our view is that that will achieve the 95% and part of our process around that is the post combustion carbon capture Environment Agency best available technology guidance will requires a

capture plan to achieve that and that we will have to present that as part of our permit application for their assessment to confirm that we are meeting that best available technology position

15:04

Is that the permit? Do the Environment Agency?

15:07

Yes. So as part of our permit up variation application for the current power plant, we will have to provide information to show that that that the technology we've selected will achieve around 95% capture efficiency.

15:24

Can Can the Environment Agency confirm that that's the case, if I

15:27

was Chris gone Environment Agency. So on the understanding that the permit is varied, and determined and issued, there will be a pilot condition that requires the operator, we refer to him as the operator to meet a minimum standard of 95%, removal and co2. There are still ongoing discussions within our sector within bays and differ as to what that 95% actually means. Do we include in that commissioners during startup and shutdown, for example? Do we include emissions that the site might emit troposphere due to a systems failure on the network, ie the transport network, which is outside of the scope of Drax power limited? So in other words, if the transport system were to go down for a new reason, would we allow the plant to operate without the battery unit? And if we did, would that amount of co2 count towards that 95% limit? So there are ongoing discussions around that?

16:33

Okay, and how and how is the amount monitored? How do you monitor the 95%,

16:41

and some other ongoing discussions about that as well, on the side of compliance with the 95% limit in the permits, and in terms of obviously with Bayes, because they're funding the project. So clearly, they want to ensure that the co2 that is measured and monitored is done so accurately. And there are ongoing discussions around the technology that is required to be able to do that. Clearly, carbon dioxide is going to be circa 98 99%, pure. So there may be some technical issues around monitoring a gas stream, or a dense phase co2 stream at concentrations of that high, but we are in discussions with providers of monitoring equipment to be able to do that.

17:30

Okay, thank you. Just so I've got this clear, there's obviously different regimes here and and different consenting process different licences. So I think what from what I understand is, if this were to gain development consent, the 95% would also be regulated to the pyramid and you couldn't operate without both.

17:54

Which agree with some of the other conditions correct. So we'd be the best plants or drugs where we ought to operate without the environmental permit being being varied. So should develop extend to be granted by a secretary states, the environmental permit is also required, as you've just heard from the Environment Agency, that will contain a full a condition, regulating the 95%. And monitoring that clearly the permit won't be granted until those discussions that has been referred to by the Environment Agency have concluded and, and solutions identified and then written into the permit. So in terms of, as you alluded to, en one makes it very clear that there shouldn't be duplication of regimes. So in terms of 95%, capture rate, you have, as you've heard, today, have the confidence that to be dealt with far the environmental permits.

18:49

Yeah. Can I just check the 95%? You mentioned around 95%? Are we talking an average or are we talking a minimum of 95%?

19:03

I quoted the text from the bad guidance, which starts at around 95%. I think, as the Environment Agency have alluded to, there are still a number of discussions ongoing with them on the permitting process that will get to a position of 95% capture rate within within that permit boundary.

19:28

Okay, thank you. Chris, gone around agency. My understanding currently is that 95% capture rate will be an annual capture rate. If that helps. Yeah, that's helpful. Thank you.

19:48

Get the moment we do have quite a lot of relevant representations which say that the technology is untested. And are you aware of any large scale carbon capture and storage projects in operating shouldn't use similar technology and achieve the 95% efficiency.

20:06

And I'll just start off and then hand over to my colleagues. I mean, first of all, we we have, you know, responses to relevant representations, documents. At page, for example, on page 82, we refer to that there are there are 35, large scale CCUS facilities operating globally, capturing around 45 million tonnes of carbon per annum. And we also have in that documents, a list of projects on page 87 of large scale carbon capture projects worldwide as of 2021, that's on page 87 of our response to relevant representations. I'd also add that Drax as a company was the first pilot project that it ran to capture carbon from his biomass units was the first company in the world to demonstrate that you can capture carbon from biomass. So the company itself has been a leading force in identify in this in this some technology and has proven that through its pilot project, and that's using the same technology that is proposing for the backscatter X project. So that's my preamble. But I'm, I'll hand it over to Mr. Foster to go into bit more detail.

21:29

Just so just begun to do yes, you have you correctly pointed out that you've referred to 35 large scale and they are collecting 45 billion tonnes, I think you refer to that, is that at the 95% efficiency rate? I think that was the question I was asking, are those large scale projects working at this 95% efficiency?

21:52

I don't know whether each of those 95% efficiency, but I'll pass it with Mr. Foster to explain.

21:58

I think moment, I don't think I can comment on whether those are achieving 95% I what I can see is the underpinning research that was done by the Environment Agency for the post comm post combustion carbon capture guidance was based on research done for them that said that best available technology should be able to achieve a 95% capture it. So that that is where the I think the environment agency's research comes in on this from a large, large capture plants. We looked at the global position on the various technologies that were involved. The technology that we've selected does have a large scale capture plant in operation in Texas in America. And it's been running fairly effective, effectively and underpins part of our reason why we've selected that technology.

23:10

Okay, thank you for that. Is there anybody else that wishes to comment on the effectiveness or reliability Mr. Hewitt?

23:22

James who is independent? The CCUS projects that have been referred to as I understand it, they weren't particularly interested in efficiency other than just for money purposes, it was for enhanced oil recovery typically, with very constant quite concentrated streams of effluent gas anyway. woody biomass has a very different characteristic, I think once in post combustion, and the and although there has been there's been talk about PrEP doing research, there is none. No. Standard, there's no woody biomass, carbon capture project anywhere. This will be the first one. I think it will be quite helpful to establish how much the pilot project for Mitsubishi one is actually a marathon, whatever it is, who's actually captured. The last I heard it was an absolutely minimal amount. And I think one was referring to the petrol Nova project in Texas, which is closed. It's closed partly because the price of oil is low. And the intermittency is crucial. And as the sister said, it's up to the national grid, how much it wants to take. So it's not necessarily going to be running 100 cars tend to capacity all the time. Thank you.

25:04

Thank you. Mr. Hewitt, would the applicant like to respond? Steven foster

25:07

Drax? Carbon capture technology is quite a mature technology it's been used for a long period of time. The the element that is slightly new here is the use of a flue gas stream to capture carbon, not the carbon capture technology. The flue gas that was used in Petra Nova was similar enough for us to be able to make some comparisons. And actually, the biomass flue gas actually has a lot of benefits when it comes to carbon capture in all the the best fuel and Petrova on the contact trial that we did it drags has proved that the flue gas and is suitable for interaction with a solvent and that it will capture

effectively. So that is the was the purpose of this trial was to prove that it was suitable for contact with our flue gas, and that it could be captured. Yes, the amount of CAPTCHA that was done was small it but it was to prove the validity of the flue gas in contact with the solvent. So it was effective at doing that. And was it appropriate scale to be able to prove them?

26:32

Man, if I miss May, so you finish on that. And I think that's the key point that since the 2011, NPS is up to today, you've had projects such as the Drax, Beck's pilot project that has proven the ability to capture carbon from the biomass, the next step is exactly what the company is doing is to apply for it at a commercial scale. And I'd also add that, of course, you've got the environmental permit anyway, that is that there are two reasons we vomits permit. Third, we'll have a condition on regarding the 95% capture. And secondly, the business model structure is put a value on that carbon that's captured. So it's in the interest of the company to make sure that his plant is operating as efficiently as possible to capture as much carbon as possible in order to avoid penalties under the business model. So you've got not just the actual environmental permitting regime, but you also have the incentive regime as well, that will to govern the 95 to work to control the 95% capture.

27:42

Thank you, Miss Brown.

27:46

Yeah, Casey Brown for biofuel watch. Yeah, so the longest running carbon capture facility in the world is boundary dam. It's a it's a coal rather than a biomass plant. And that's in 2021, it only captured 90s at 37% of the target 90%. So that's a that's a real world example of CCS it at scale, but obviously not Beck's at scale. And I think this conversation touches on the in terms of how far along the technology is. It doesn't seem to be quite at the at the stage. That's been applied for we think.

28:37

Thank you, Miss Brown. Mr. Griffiths?

28:41

Yes, I think Mr. Valley would like to comment from the from the applicant.

28:47

Look valid Drax. There's two scenarios that we're talking about here with regard to the development of this technology. One of the is obviously a chemical reaction, which we think pilot schemes for. The other one is around basic design, it's very difficult for us to outline the basic design of the project so we can talk around is our projects. And the basic design that we've taken forward is for 95% capture. process design helps dictate that with regard of spaming philosophy, philosophy, chemical dispersion, working alongside the likes of the pilot and scheme to prove that the technology from a chemical point of view will work as well. So there's there's two angles where we've worked towards is 95%. And as I say, our basis for design for the drugs project is a 95% capture rate achieved.

29:41

Thank you, Mr. Farley. I think I might as well bring this up here actually something I was going to bring up later in the agenda and regards to the Humber low carbon pipeline and the recently made DCO four key B three included a requirement which amongst other things did state that the development should not commence until the environmental permit had been granted? I would just like to seek the applicants view on this as a very recently made DCO with such a requirement. And could I seek your views? I mean, it amongst other things, which we'll come back to later, perhaps that was one of the parts of that I think it's requirement 33 Anki. mp3?

30:29

Thank you, Madam. Yes, I'm aware of the requirements. And I think that's the starting point is that we we need to distinguish between the two projects. That project is for a new generate generating station with a carbon emitting Generating Station. And therefore, it's not surprising that you have the requirement springing up on there that's prevents the commencement of development. Until I think it includes not just the permit, but also the concerns for the transport network. Yeah. Yeah. That is, I think the first starting point is that that's brand new generating station. And to get that benefit to avoid the carbon emissions unabated, I can understand the reasoning for that requirements be placed on it, this application is of course different. We are already an operational generating station. So there's no ask permission, there is the reasoning for that requirement. Is does not apply in this scenario when we are already in operational plants and can carry on in some form, regardless of whether you grant a unit one and two, consent for the backs plant. Regarding that, and the requirement to prevent Beck's Drax, commencing development until the transport network has been consented. We would also argue against that on the basis of our submission would be doesn't wouldn't know what to call it a policy policy is very clear that Beck's has the ability, and this is in a biomass policy statement of November 2021. That retrofitting existing retrofitting CCS technology to existing large scale biomass plants have the ability for Beck's to deliver steady increases in removals of greenhouse gases from the late 2020s to the 2030s. And the only way you can achieve that is if this project, which will account for around eight, 8 million tonnes of carbon per annum to the 20 million tonnes per annum, going through the pipeline in the Humber. So significant proportion of that pipeline is if the when the when the applicant has confidence that the network system is is going ahead, that actually, it can start preparing works for its next project, in order to be in order so that when that pipeline is ready, and operational, Beck's can come online almost immediately to hit the target data 2027. And therefore give the government the ability to maximise its ability to meet its at the six carbon budget in 2020 2035. And indeed, it's not in the national contribution figure of 2030. So if you're not careful, then by restraining one project, that's a main contributor to carbon savings, by waiting for another project to get consent in that fashion. As per keybie, we would argue that you're at risk of being gates policy, you would have the comfort day that the company is not going to start with anywhere balance the harm caused by the company commencing developments, preparing the ground works, etc, in advance of the network getting consent. What is that harm? If that harm is acceptable, then why then the company is willing to take that risk? Why shouldn't it the ultimate comfort you have is that we won't be able to operate without the environmental permits, in any event. So our argument is that the requirement wouldn't make sense in a world where this is not a new carbon emitting Generating Station. And secondly, that to meet the 2027 and 2030 and 2035, dates, and then ultimately net zero by 2050. This project has to come online as quickly as possible, and our concern would be a risk to that.

34:43

Okay, and I understand your argument there. But could that argument not be put to keep v3 as well? The same argument could be applied surely in that situation,

34:52

but I would repeat that it's new generating a new carbon emitting Generating Station. We're not we are existing and as the policy statements is backed by most policy ministers, the quickest way to help meet the government's targets is by retrofitting existing large scale biomass plants with carbon capture technology. And this is exactly what this project is.

35:16

Okay. And obviously, that requirement does have several parts. As you point out, it's preventing development commencing until several, several projects have consent. I think for this item here, let's focus on that environmental permit. Commencement of development drugs would have some environmental impacts, the environmental statement doesn't say that there are no environmental impact. We're weighing up those environmental impacts against benefits. That's, that's our rule in this examination. So those environmental impacts would have if you didn't have a requirement, preventing you from starting development until that environmental payment had been granted, then environmental impacts could occur, what would happen if you didn't get that environmental permit? And you've gone ahead and you started work and had some environmental impact?

36:05

Well, then the if the environmental permit, for some reason was refused, then and work is started, then frustration would probably take place. Well, we're straying into DCO hearing for tomorrow. But I mean, one, one potential requirements that we could potentially consider would be site restoration requirements. So should work begin in the fashion I've described, proceed and the environmental permit that's only required that's required for the operation, not 40 construction, then we would be under an obligation to restore the land accordingly. So that's something that we could consider. Should we delve into this tomorrow? Yeah,

36:47

that's fine. I think it is something I would I would like to consider at the moment, I'm failing to see the argument as to as to what the harm would be in having a requirement preventing you from commencing development until the environmental permit was in place. If you're, you know, you're quite confident that environmental permit would be granted, then, what would be the harm?

37:10

Well, I think we need to I mean, I haven't got in front of me analysis of the what what is that harm if if, if certain works had commenced? What actually precisely is that harm? Obviously, there isn't there is some harm because there's construction, there's air quality, but does that how does that how does that impact? Is it such an extent that you should prevent that happening before the environmental permit is granted? That's the question. And I'm happy to take that away and look and consider what we the extract, if you like the construction impacts of the scheme. To demonstrate or to argue why we consider those impacts would be acceptable before the environmental permit was granted if that's helpful.

37:57

Yeah, I think I think perhaps, I mean, perhaps it could be something that you could look out overnight, and it could be something that we could return to tomorrow and in the DCO world,

38:05

well, we'll do our best overnight, or at least depends on the EIA team. You're not necessarily will be at the dieser hearing, but we'll see what we can do overnight. Okay. Thank you.

38:14

Thank you, Mr. Gryphon. I don't have any further questions on this item just as anybody else before we move on. In which case, I'll hand hand back to you, Mr. Northover.

38:30

Thank you. So moving on to the circumstances that will determine the scope of development construct one or both units, can the applicant outline what the circumstances would be? That would determine whether just one unit would be developed?

38:47

Thanks. So I'm gonna pass over to Richard bass, who's head of commercial development at Drax to provide that answer.

38:53

Good morning. My name is Richard bass, I'm head of commercial development for Drax power. So as I think outlined in our documentation, the project so far has been developed as a two unit project from the initial preferido studies feed that's ongoing, as well as the DCO application. And it is our intention to construct both units together as set out in the documentation. However, the development of the project is also subject to commercial agreement with base for the support mechanism. And that support mechanism were contending would preferably support the development of both units as I've just described. However, it is also possible to base for their own reasons or agent Treasury may decide that they actually want to fund one unit, and in which case, that is what we would proceed with. But ultimately, it comes down to that commercial decision in between government and ourselves. But as I said at the initially, our contention our plan is to develop both units. The reason for that is we believe that matches with the overall targets that need to be met for carbon budgets five and six, as well as net zero the contribution of the two banks units together fundamental delivering those targets at least possible cost. And also meeting the government's targets for GT RS for 2030, as well as 2035. So they all align very well with that to unit project development.

40:20

Okay, thank you. And if only one unit was constructed, does the unit not? Does the generating station associated that doesn't have boats applied? Does that continue to operate as per units three and four?

40:38

Richard Griffiths on profit advocates in essence Yes, so, should only use one unit halfbacks applied to it, then the three other biomass units will operate along in our in our assessment, in our view in the mid merit scenario, so approximately 4000 hours per unit per year.

41:00

Okay, thank you. And in the same scenario, if only one unit was developed, with the scope of work, number one a the water trip pretreatment plants in one be the cooling water system change? Or is the full scope of that work required? Whether only just one unit is developed, or both units developed?

41:28

This will be a technical answer. So I won't pass to Mr. Chris summers.

41:38

Christmas drags the improvements there, there will be benefits to carrying out the improvements and all the upgrades from just a single unit. So if we would do the same works, well, just a single unit.

41:54

Okay, thank you. So it's those, the scale of that work isn't scaled according to the number of generating units that x is applied to.

42:04

There's there will be proportions, but there is benefits to sort of doing it as a an overall upgrade.

42:11

Okay, and just following on from that, in Does, does the unit without the tax applied to it benefit from those upgrades to existing plant? Even though it's not having the carbon capture applied?

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For summers? Drax? Again, there is, like we mentioned earlier there is a an overall station benefit to the upgrades. So it's

42:38

all for biomass units that generated from that efficiency,

42:42

they all the existing station uses the same infrastructure. So okay, thank

42:47

you. So, so in essence, the benefits, that's the expansion memorandum refer to which you started the hearing with would apply to the, to the operation of the generating station as a whole regardless of the units. And also add that it could be a scenario that, in the current discussions with governments over funding, that should they say we're only going to fund one unit now, but it doesn't include, of course, the fact that they could decide to then find later unit two. So in terms of unit work packages, one and two were discussed, there would be an element of justification for the slight oversizing, even if only one unit

was initially being constructed, because you'll do that work once given, it's in the middle of the power station, etc. We want to minimise the construction. So that and the shared facilities that obviously there'll be shared facilities to to construct that and then effectively just be if unit. If a second x unit came along, you'll just be building that, more or less that standalone, second x unit. I'm sure that decision be made a few years later.

44:01

Okay, thank you. Was there any questions or comments anyone in the room or virtually wanted to make on this matter? Yes, Mr. Hewitt.

44:13

James here is independent. It may not be appropriate. Correct me if I'm wrong. The suggestions that the government is going to be funding the construction work, I think perhaps needs to be reassessed. As I understand it, Drax in his application, has said it's very good at raising money and would be able to build construction itself. What it that is premised on is having a stream of income from the contract for difference our index if it ever happens to then pays that loans and other things back. So it's the government investment is not really an investment. It'll be a contract for difference after after the thing has been built and is operating, if it's operating. To the amounts that they say, well

45:07

I can I suggest we come back to this under the item need on the agenda. So but can I ask that the Atkins mate made a note of Mr. Shirts comments and come back to that?

45:21

I think I would just like to say at this point, if it isn't for the examining authority to get into details of of financing, and some of the things that you were saying there, you know, the subsidies and where that money is coming from it, it isn't for us as an examining authority to look into the merits of that it is just the scheme itself. Mr. Griffith, did you want to reply to any of that?

45:49

Specific financing the construction? I didn't whether Mr. Bascomb. had anything to comment on that?

45:54

Yeah, so just just clarifying maybe misunderstanding. So the Becks project will be set up and financed per the base minded to business model, which will be a combination of past safety and a carbon CFD that will allow by blacks to raise the funds for the construction and operation of the project. What their business model also does to pick up an earlier point is that they will incentivize the Becks plants to run essentially place baseload so they won't be intermittently operating, but they will operating baseload and generating maximising the generation of the negative emissions that were talked about earlier.

46:40

Okay, thank you. I'll pass back to Mrs. Jones to cover the next item.

46:48

Okay, we went to the final part of this agenda item. And that's the operation and load profile of the banks and non bank generating units. Paragraph 6.9 point 60. And es chapter six says it's likely that the CCS enabled units would be brought into operation more more frequently than the than the non CCS units. What measures would be in place to control that?

47:33

Yeah, I think the answer to that sorry, which was on top of the outcomes in terms of the operating mode of the seat of the units with CCS, that will be governed under the commercial model, commercial contracts that Mr. Passes just referred to in the previous answer to how they the operating mode would be linked to that, and as has just been explained, that is baseload. So hence, the assessment is low to 8760 hours, which is the CCS units operating 365 days of the year for baseload.

48:10

So the control of bringing the CCS units as opposed to the non CCS units is just something that's controlled from within within drugs itself,

48:18

incentivized by the commercial model. So as in any power station, it will operate based on the commercial model under which it sets. So when you look at today, we are subject to the CFD on unit one, the renewables obligations on the units two, three and four, and they operate accordingly based on commercial incentive. Likewise, when the units want to convert TBEX, they will be subject to us power CFD, as well as a carbon CFD in our modelling and assessment, those work, that business model will incentivize those units to operate baseload. What happens to the units? Two and three is a different question. Okay.

48:56

Thank you for that.

48:58

So it's a quite I think you've been three and four. What was the three and following what you just want to check? Sorry, I just want to clarify the tape.

49:04

Yeah. Thank you. That's all I have to ask on this item. Does anybody else in the room have anything they wish to? To add? No, okay. Then. In that case, we will move on to Item four of the agenda, which is need. I'd like to begin this item by asking the applicant in the first instance to outline the need for the proposed development as set out in the needs and benefits statement, which is examination Library Reference Number EPP 033. And then if you could move on to emerging government policies. Mr. Griffith say I'm aware that this morning we didn't quite get to you giving us a your summary of national policy. So perhaps this might be an appropriate place. If you added to added on to to the end or the beginning, whichever city Yeah.

50:05

Thank you. I thought I got away with that. So I'll start with with the national policy statements given they are course the primary policy on which the scheme needs to be assessed and the two adopted national policy statements that are relevant to the BEPS project and of course, NPs en one, which is the overarching NPS for energy and NPRC and three, which is the renewable energy policy statements. In terms of general principles, part two of MPs en one outlines the policy context for constructing a new nationally significant energy infrastructure, which reflects the government's commitment to meeting the key carbon goals, carbon reduction goals, goals, energy security, and affordability, the what I call the three pillars of the energy policy statements, carbon reduction, energy security and affordability. And paragraph two point 2.6 of en one states that under some 2050 pathways, the electricity generation would need to be effectively virtually emission free. And it clarifies at two point 2.7 That emissions must start falling as a matter of urgency. So that's the general principle behind in en one and of course, our submission is that in the planning statements, and the need to benefit statement is that the BEPS project at Drax accords with that urgent commitment to reduce emissions part three of en one then identifies the different types of energy infrastructure that can play a role in that. And the project before you as I've said earlier today, this is a not a new generating station, it's an extension to an existing biomass generating station and part three of en one confirms at 3.4 point three. As a matter of policy, I appreciate there might be differing opinions as to that policy. But as a policy renewable. Biomass is classed as a renewable and low carbon source and it's needed class urgent, then en one does refer at paragraph 3.6, point four to 3.6. Point seven refer to the role that carbon capture and storage can play in meeting those carbon reduction targets. At the time of writing en one in 2011. It refers to 90% of carbon reduction. As you've heard today, technology has moved on and that figure is now 95%. apart for repeats, the need for carbon capture and storage technology, and, again repeats the 90% reduction. So our argument would be that the BEPS project in terms of the adopted in one exceeds the policy target of 90% by 90 by saying that there's going to capture approximately 95%. So in terms of en one expects that Jack's project accords with the policy drive to reduce carbon emissions in that statement. We then turn to en three the adopted en three policy statement for renewable energy which biomass forms part of and part 2.5 only refers to carbon capture readiness, which at the time was what's the technology, they felt they couldn't go to the next step of carbon capture and storage, but only refers to carbon capture redness. Of course, this project is the next step along that by definition, you could argue that the existing operating session is carbon capture ready because under the requirements, you have to demonstrate there's this deficient land, or clearly with the application in front of you the carbon capture technology is being fitted and meshed in with the existing generating station. But it's no in en three there was no specific policies on carbon capture and storage. However, that policy has to then be read into what I'm come on to next with the emerging policy statements which we would argue are important and relevant considerations for Secretary of State. And they do go further than the adopted pet statements in respect to the need for carbon capture and storage. Paragraph 3.5 point one of n one states that carbon capture and storage infrastructure and I quote will be needed to ensure the transition to net zero economy. And then 3.5 point one of draft E and one quotes the Committee on climate change from its 2019 Report to say that carbon capture and storage is a necessity and not an option. Palghar 3.5 point one of draft en one then refers to the areas where CCS infrastructure will be needed and bets power is identified as one of those paragraphs 3.5 point three of the draft even one goes on to state that there do not appear to be any realistic alternatives to new CCS infrastructure for delivering net zero by 2050. And that's because there are recognises there are some sectors that are going to be difficult to decarbonize aviation being one and agriculture being another. And so there was a need for

carbon capture technology, and bet to get to to achieve negative emissions to counter those difficult sectors. So we would say that, for those reasons, in 3.5, point 123 point 5.7 of the draughty and one that the Beck's project attracts accords with that policy. And then turning to the draft en three policy state policy statements, national policy statements, paragraph two point 5.4 refers to biomass generating stations, of course, that's the host generating station for this extension. And the en three requires new biomass generating stations to either be carbon capture ready, but then it does go that one step further in recognition of advancements in technology, and says either CCR carbon capture already, or having C, CS technology applied to it, and then it refers back to draft en one. So again, we would argue that, given that we are a biomass plant, we fall within en draft year three, and we are now applying that carbon capture technology to the operating station. So in conclusion on the national adopted national policy statements in the emerging policy statements for those reasons, we always say that we are in compliance with the with the policy direction in in those statements. The planning statement does go into detail of how we comply with specific environmental policies. I wasn't intending on going through those now. But Mr. Matthews stocks from WFP can do that if that is required. Otherwise, I can move on to the second part of your question on the on the needs and benefits statement.

57:13

Now I don't feel there's a need to go through just to repeat what we've already got in writing. But I would like to just ask you a few questions on on the NPS is NPS MPs em, one, just focus on what you would call this energy schemes. The application before us isn't an energy scheme as such as it

57:40

the application before he was an extension for the generating station, and therefore is falls within section 14 of the Planning Act. And by by being a an extension to generating station falls within an energy

57:53

scheme. Okay, that's that's your perspective. And it's because of that, because it falls it is an extension, but it doesn't actually produce any energy. And it's in itself. The

58:02

know the carbon capture plant doesn't before doesn't generate electricity. But an extension to generating station doesn't need to generate electricity. Is a land use land use?

58:13

Yeah. So it is a nationally significant infrastructure project. And that's where section 40 comes into play. But that is that is different to whether or not it falls within the grace of section one, I would say 104 and one five of the Planning Act, because that's something completely different. I think that's what I'm trying to get at here. All we are you are 100%, that this should fall within one of our is there an instance here where we could be within the bounds? Because Because national policy statements don't specifically support the application, if you were just taking the application by itself?

58:51

What if you just took the application if you just took the carbon capture project on its own. And if that was the application for you without a host generating station, then I would agree that that would be a 105. Case. And the current adopted one, I think it would be different on to the draft policy statements that refer categorically to carbon capture technology, and state that even if there isn't a dedicated policy statement to emerging technology, and it highlights carbon capture is one of them, then you assess it that scheme in respect of one alone, you don't have that precise clarity in one. Our position is I understand where you're coming from, and we can take this away. And is that because this is a it's an NS national infrastructure projects. It meets the definition of extension for generating station and that's an energy project and therefore it falls within the energy policy statements that do of course refer to carbon capture. So I've outlined just now So our argument would be that it's a 104 case. And I think you will all six letter refers to 104. However, I can take away your question over 105. mean, our submission would be, even if you determined it under 105. You'll be then putting in worn and draughty and worn in the important and relevant basket and weighing the benefits? And will you still come out with the same conclusion that the need, and the benefits outweigh the harm? So I would still be the same. But I would I have to take that away. And yeah, I wouldn't know if it was possible first printing questions, we can provide a note to outline opposition in more detail.

1:00:40

I think that that would be beneficial studies and examining, so we will have to come to that conclusion ourselves. But I think it would be beneficial if you could provide us with an with a note fully setting out your rationale behind it being considered under Section 104. And perhaps and in the case that perhaps isn't exactly so do we we consider it's one of five, what your case would be in that situation as well.

1:01:03

Yes, yes, totally is done, we will, we will start our reasoning which record without planning statement as to 104. But then, to stand, you've got to make your own conclusion. And if you should you disagree with the applicant, we will then determine we will then set out a 105 case, as well. Should you disagree with our reasoning. So you have both positions to make your own decision.

1:01:22

That would be most helpful. Thank you. Mr. Griffiths. Do you want to continue to continue on?

1:01:32

Thank you. So the second part of that was the MPSS. In terms of the needs and benefits statement. I wasn't going to go into the economic benefits. If you need if once go into that. I'll pass over to Mr. Matthew stocks. But in terms of the general, neat, I start with a need and the benefits. Mr. Sorts can take over in terms of the need, I've outlined the policy position in in the in the NPS is and I suppose this one, I'd say is probably more applicable in the important and relevant category of 104. But also, if you determined it was 105, then it would also be applicable there. That aside from the national policy statements, there are of course, a raft of other policy documents that the government has set out why carbon capture and power Beck's is needed. And if I kind of identify those, my starting point is that you've got the Intergovernmental Panel on Climate Change. 2022 reports. The stage though without immediate and deep emission reductions across all sectors, limiting global warming to 1.5 degrees limiting because it was then limiting global warming to 1.5 degrees is like quote beyond reach, you'll no

doubt be familiar with that report. And the IPCC highlights that Beck's is an important tool to achieve climate change mitigation, and is an integral part of all widely accepted pathways to keeping global infrastructure rise to 1.5 degrees. So as the Intergovernmental Panel on Climate Change, saying why Beck's is needed, and therefore why we would argue, Brexit Drax is needed. I'd also the most recent document is not government policy, but it's a report commissioned by government, which I referred to earlier that was published on Friday the 13th of January 2023. Mission Zero, authored by the Right Honourable Chris Skidmore MP. And that's an a paragraph 347. His review states that biomass plays an important role in the netzero transition that I quote, as an input for deployment of bioenergy with carbon capture and storage, it could also generate negative emissions in the future. It goes on to say there's in all the scenarios outlined to the net zero strategy. I'm pretty sure that's going to be discussed shortly. That all those scenarios that the government identified in its netzero strategy, X technologies at Beck's technology delivers well over half and actually close to 70% of negative emissions. And the report goes on at section 2.7 to highlight 30, again, all model pathways to net zero, envisage a key role for CCUS and repeats the Committee on climate changes, description of CCUS as being a necessity and not an option, that's therefore mirroring what draft en one says. I appreciate that review is not government policy. It's an advisory document to government. But then you've got and I won't go through what all the policy documents say you have that in the needs and benefit statements. I won't repeat it. But you've got then the need is supported for Beck's in the November 2018 Clean growth action plan, though again repeats the need for backs and how the backs can help in its in reaching the government's legally binding commitments and notch also is refers to independent advice for the Royal Society and the Royal Academy of Engineering, who then got the November 2020 10 Point Plan for green infrastructure, which again, highlights the need for CCUS infrastructure and the economic role it can play. And then you've got the the to me December 2020, white paper that talks about the clusters of which backs forms part of the East Coast cluster, and is a key part of that. Then you've got the 2021, October 21, zero strategy. And then the biomass policy statements also in November 2021, that I've already referred to, and the consultation document on the biomass and on the backs modelling. So effectively, in terms of need, aside from what the national policy statements say, you've got a raft of other government policies, that all say that to achieve net zero by 2050. And taking into account, the government's taking into account independent bodies, such as the climate change committee, the Intergovernmental Panel on Climate Change, will Sardi cetera. Et has come to the conclusion that there is a need for gas greenhouse gas removal technology. And then in particular, government policy recognises the role that banks can play. And it's not just carbon backs at Drax, it's not just about a carbon saving, but by applying it to biomass plants, you then also the benefit of dispatchable renewable energy, which of course helps balance the grid as the grid becomes more dependent on renewables such as solar and wind that which are intermittent. The policies also highlight the need for retrofitting to existing biomass generating stations, which it says is the quickest way of achieving its 2030 target of capturing between 20 and 30 million tonnes of carbon. So in summary, on the need side, and aside from the MPs policies, there is a clear need for Beck's at Drax, it's a retrofit solution. It's therefore can be deployed quickly it can help the government meet its 2027 and 2030 and 2035 targets. And without it, the policy states that the state's carbon budget at the fifth carbon budget is in jeopardy starts cancer through the need side. In terms of benefits. I can pass you over to Mr. Matthews talks about some of those benefits, if that's helpful.

1:07:32

Yes, if we can give it to you and give everyone keep it brief. You don't need to repeat anything that we've already gotten in writing.

1:07:40

Yeah, thank you. Matthew stocks do USP representing the applicant Drax power. In summary, the proposed scheme will contribute towards the acceleration of clean growth, as we've talked about, and the creation of 1000s of new green jobs across the UK, whilst making Britain a global leader in developing climate saving technologies. And that is detailed and further with the needs and benefit statement. App zero, double three, three, the number of jobs are detailed in there as well, in terms of the construction process, and once the units are operational. And that's direct, indirect and induced jobs. I can run through those because if necessary, but as I say the avenue needs a benefit statement.

1:08:24

Yeah, no, I don't really I mean, this, I think this generator is more about the need rather than looking at the benefits in that sense. And that might be something that will come out in future hearings, perhaps or questions. So thank you. Mr. GRIFFIS Do you at this point, just I think it would make sense before we hear from any anybody else. Do you want to now update your position on the Net Zero strategy given given the judgement at the end of last year?

1:08:57

Thank you. I don't think any updating necessary. I think we should be clear on what that judgement says. So net zero strategy, as has been pointed out was of course traditionally reviewed last year. Now the court did uphold the challenge. But the court did not quash the strategy. That's an important point. Therefore, the strategy netzero strategy 2011 remains in place. What the court did order was that the government needs to publish an updated Climate report by the end of March 2023. Setting out how setting out further detail on how its net zero goal would be would be achieved. So that the the that's the point the challenge was successful. And the basis the court found that in the ministerial briefing in looking at the net zero strategy, that briefing did not contain quantitative effects of each of the individual policies. So how much would each individual policy contribute to the net zero goal and as the policies were only going to get to 95% of the target. There wasn't a quality of analysis as to which policies would then make up that 5% For shortfall. That was the reasoning why it fell down. And the Secretary of State, therefore has to provide more information on on those elements. The court didn't of course, as it wouldn't be appropriate to comment on the merits of each individual policy in the next year strategy itself. So as it hasn't been quashed. The net zero strategy remains government policy. And that's been reaffirmed recently, in the secretary state's decision, in this case, Secretary for transport in the on the a 417 development consent order, where the Secretary of State acknowledged that there had been accessible challenge to the netzero strategy. But the Secretary State confirmed strategy remains government policy, as it had not been quashed. But then what the Secretary State did was then consider that scheme, which obviously a road scheme in how it would whether or not that Brosky would hinder the delivery of its on the Net Zero strategy. So against that backdrop, the Secretary State determined the A 417 Development Centre order. So our position is that net zero strategy remains government policy. And the examining authorities while examining 14 needs to do and what then the Secretary State will need to do is consider this application against that backdrop, and ask the question,

would consenting Brexit drags hinder is delivery of the net zero target? So that's our position on the 2011 document, or 2021 document.

1:11:45

Thank you very much. Mr. Griffith. Does anybody have anything they wish to raise on what they've just heard? No, Northover?

1:12:01

Yeah, I just have a couple of points of clarification on statements made in need some benefit statement. So firstly, in relation to the existing coal units, is there any change to the statement in paragraph 3.3, point four of the needs and benefits statements, which says that the the remaining two remaining coal units stopped generating electricity commercially in March 2021, and will cease operations entirely prior to the constructing the proposed development?

1:12:35

Mr. Chris summers will respond to that.

1:12:37

Chris summers drags, that was the initial intention, our company intention was to cease operation. Last year, we've since got approached by national grid to extend coal over this winter period. So that that decommissioning of five and six will occur this year, in March.

1:13:01

And I'm Mike, correct in understanding that the decommissioning of those coal units has to happen in order for the proposed scheme to be viable in its current design. Chris summers,

1:13:12

Dragon Yeah, that's correct with the footprint X or some of the existing the infrastructure for five and six plus the cooling capacity on the cooling towers. Okay, thank

1:13:25

you. And that and that's why in the baseline, we don't have unit five and six in operation, it's unit one to four, because by 2027, they will have it, they will have born. And obviously there's been a discussion with government, as you've heard over this winter period.

1:13:42

Okay, thank you. And then the next item was in relation to biomass supply. Now, I am clear on understanding that the application is not for the supply of biomass, but given that the proposed development depends on the supply of biomass. Can the applicant just comment on whether there are concerns for predictability of sustainable biomass supply? And this is in the context of paragraph 4.2 point 41, which refers to limited sustainable biomass supply being a reason to prioritise biomass where it can be combined with CCS. And so it's just that phrase limited sustainable biomass supply. I just wanted to check there weren't any concerns for the the operational lifetime of the project.

1:14:51

In regard to the question you've just asked, I can confirm there are no operational concerns in regard to the supply of sustainable biomass for the Beck's facility or the two remaining you Unix will operate alongside it.

1:15:02

Okay, thank you. Does anyone have any comments relating to the need for the proposed development, this agenda item, before we move on? Miss ROM? Yeah, Casey

1:15:16

Brown for biofuel watch, just to go back to the points I was making earlier. And taking a sort of step back and looking at the the policies about electricity capacity and about renewable electricity capacity. And at the minute with the scheme proposes reducing the output to the grid. That's the that's the overall electricity output in terms of energy, security and supply, and then renewable energy, our electricity output, if you want to call it that, which obviously falls under the renewable energy policy, on the point that I call you here made is that it's likely that that will be compensated for elsewhere by fossil gas. So it could increase the use of non renewable energy. And it's very important to bear in mind that in the context of the the available data for how much carbon is likely to be captured, you can say we're aiming for 95%. But when the real world examples are showing much lower figures, and I think all of that needs, obviously, needs to be looked at together. Thanks.

1:16:40

Thank you, Miss Brandon, those comments are noted. Mr. Griffiths, I don't want to ask you to repeat yourself, because I think that earlier on, you have provided an answer. And I knew in your post hearing submissions, you do intend to explain in perhaps more simple terms, what the alternative would be in terms of output if the project didn't come forward?

1:17:02

Thank you, Madam. Yes, I think I've responded all those points there. I've responded to throughout this morning and early afternoon hearing. So I think there's no new points there. You've heard of the applicants position. And there will be some obviously written statements, as per the action list. So yeah, I've got nothing further to add there.

1:17:19

And we will we will we have asked for sums in the action list. And we will get post hearing submissions from the applicant, which of course you can then comment on during the examination as well. Okay, Mr. Hewitt,

1:17:33

just a very quick one. The assumptions here is that the backs or the the supply chain is suitable. I wouldn't necessarily contest that tax is not a good thing, whether Drax should be the one to do it. And its supply chains are important. There was a scandal in States recently the leading supplier was there's a class action lawsuit against fraud. And their share price dropped by 11%. And it's stayed low. The sustainability supply rather sustainability in terms of physical fitness. I understand what I've seen

parliamentary TV videos for the chief executive, and also the think the director for sustainability. And it was yesterday struggling to satisfy the parliamentarians as to the validity of the claims of sustainable biomass. And it's going to be quite if I'm parliamentarians slightly difficult, I think the public who want to win needs to get the social acceptance of the scheme to to give them give them more confidence.

1:18:52

Thank you. Mr. Hewitt, I think I do understand that people have concerns over the supply chain and, and biomass and where that comes from. But what I would just like to remind everybody that the purpose of this examination is, is to examine the current project that's before us. And that isn't for a biomass power plant, it is purely for a carbon capture associated with that with that power plant. I do understand that emotions are in quite high around this topic, but it's just so that we can try and keep focused on what we're actually looking at and what what we are here as an examining authority to examine. Mr. Griffiths, would you like to respond to that?

1:19:35

No, I have nothing to add. I've already highlighted how sustainability the biomass is controlled through and how they how they currently operate unit one and two. It's gonna be through the CFD and the renewables obligation and then should back to backs be consented. It will then be under the business the business model. I've said that already. I just repeating myself but I'll leave it at that.

1:20:00

Okay, then I think I think that leads us to a natural conclusion for let's just always use sorry. Yes. Okay, if my

1:20:08

thank you, Mary Dickinson biofuel watch. Just quickly on the IPCC as the applicant is mentioning it quite a lot within the need for this development. I think it's worth noting that the IPCC report does come with qualifications regarding biomass and sustainability. So itself, it states that the guidelines do not automatically consider or assume biomass use for energy is carbon neutral, even in cases where it's produced sustainably. And it goes beyond to say that the approach of not including the emissions of the energy land, new sector, title should not be interpreted as a conclusion about sustainability, carbon neutrality of bioenergy. So I think it's just worth putting that in context of the IPCC. In terms of the needs. Thank you. Thank you, Mr. Carson,

1:20:57

if I can just respond to that. I mean, I have made it clear that I'm very beginning that the in terms of having said carbon neutral, I've said, the supply chain has been assessed in the GHG assessment that is before the examining authority, were referring to carbon zero rated, and on the IPCC, I don't dispute our qualifications. But that is going back to the how the sustainability of biomass is controlled through government subsidy, as it is now and as it will be in the future. And this is emphasised in the consultation on the business model for power Beck's of October 2022, were one of the in section three, it highlights that it is the intention of government to strengthen the existing sustainability criteria for biomass where possible, and take this opportunity to increase the GHG Emission mitigation potential of biomass use. So the government recognises how important sustainability but also makes it clear, it's

going to be dealt with through the business model, and en one and en three and draft en one and draughty and three, make it clear that that the renewables obligation and CFDs do control subsidies and that the examining authority can therefore rely on those regimes to deal with the sustainability of the supply chain.

1:22:17

Thank you, Mr. Griffiths. Before we break for lunch, is there any anybody else who would like to raise any points? Okay, in that case, I'm going to suggest that we take an hour for lunch and we reconvene at 10 past two, just to remind those who are watching on the livestream, that when we come back at 10 past you you will have to refresh your browser and also in order to just start the viewing again. Thank you, everyone.