A submission for Deadline 6 by James E Hewitt Interested Party 20032086

Critique of "Powering Up Britain: Net Zero Growth Plan" & "Net Zero Strategy"

General *(specific critique for each is presented on subsequent pages below)*

The following has been prepared in response to ExQ2: 19 April 2023, items PPL2.1 & 2.2.

The applicant's proposal is inconsistent with what the April 2023 edition of the "Powering Up Britain: Net Zero Growth Plan" (hereinafter "PUB NZGP") states is the vision of the UK's "Net Zero Strategy" (of October 2021) (hereinafter "NZS").

Its proposal and current business are inconsistent with the Climate Change Committee's "Progress in reducing emissions 2022 Report to Parliament" (06 2022), which advocates a shift in biomass procurement from imports to UK sources and a much stronger assessment of both supply chain carbon debt and the potential for alternative usage – problematic for supply chains outside UK jurisdiction.

Neither POB NZGP nor NZS provide convincing argument that the authors recognise the well-known fundamental weakness of the applicant's current business – generating electricity by burning (imported) woody biomass is not carbon neutral. Given the government's promotion of further exploitation of fossil fuel and the weakness of policy (for example lack of detail and delays in curbing demand), the payback period is likely to end long after the UK's carbon budget will have been exhausted. ("2050" is not relevant).

Despite surely being aware of the crucial difference between biomass from annual crops (which appear to have been what the IPCC and others envisaged) and trees (which not only take much longer to grow but also provide valuable ecosystem services). It is remarkable that the authors of those two publications ignore that distinction...

Proceeding with the proposal would serve to delay the urgent imperative of ceasing to directly emit CO_2 when generating heat and power or doing so indirectly through the emissions embodied in what the UK imports.

That proposal is not market-driven – it is subsidy driven. The technology proposed for the carbon capture facility is both unproven and unlikely to achieve anything like an annual average of 95% - serving as a Trojan Horse, primarily in order to secure subsidies.

Both PUB NZGP and the NZS emphasise green growth, yet the applicant's proposal

(i) will not pull through further such proposals (unless these are heavily subsidised),
(ii) is intended neither for growth nor, contrary to what is generally envisaged, solely for sites of hard-to-abate industries such as steel and cement (of these continue to be needed); instead it is for stasis (merely "to keep the lights on"),[1]
(iii) would tend to dampen growth as and when it fails to meet the wildly optimistic performance around which the proposal is presented,
(iv) would utilise much of the permanent storage projected for BECCS (a very valuable constraint on growth),[2]

[1] The PUB NZGP states "*Our priority is to reduce greenhouse gas (GHG) emissions from human activities and to only use GGRs to mitigate remaining GHG emissions that are unavoidable.*" That first priority renders the applicant's woody biomass ineligible for support.

[2] Table 2.1 of "Powering Up Britain: Charts and Tables" suggests a total capacity of one GW for BECCS in 2030 and two GW in 2035 and 2050 but does not define whether that capacity takes the

Specific critique - *"Powering Up Britain: Net Zero Growth Plan"*

PUB NZGP does not recognise that dispatchable power is likely required until there is sufficient storage (including a generous margin) to respond to peaks in demand unmet by the availability of nuclear and renewable sources. The cost of providing this reserve of otherwise unused power stations would tend to increase the cost of electricity – rather than the opposite. Biomass power is likely to be one of the most costly sources of dispatchable power – in intermittent or base-load operation – especially if it ever succeeds in operating in with carbon capture (especially at equitably determined prices which consumers are willing to pay).

PUB NZGP states "*As a principle, we will pursue options that leave the environment in a better state for the next generation and benefit our health by improving biodiversity, air quality, water quality, natural capital, and resilience to climate change.*" This is diametrically opposed to with what the applicant's proposal would achieve and what - *de facto* – current regulations allow.

PUB NZGP gives the false impression that greenhouse gas emissions embodied in the UK's net imports (and international shipping and aviation) are irrelevant and can be paid for – to paraphrase an article by the eminent Oxford energy economist Dieter Helm entitled "The net zero 2035 target for electricity is not credible" dated 18 April 2023 available from his personal website.[3] The final paragraph of page three of that article includes the following sentences "*The net zero target is conveniently one for domestic territorial emission. s. It leaves out all the nasty carbon-intensive net zero materials and equipment that are imported too (and it leaves out most of DRAX's emissions).*"

PUB NZGP wrongly asserts that "*Removing carbon dioxide from the atmosphere is essential to meet net zero*" (implicitly the UK's net zero target for territorial emissions). Reduced demand, improved efficiencies, storage and the like would probably be cheaper and more assured – but would require greater political leadership than currently appears likely.

In a reference to the delayed Biomass Strategy, PUB NZGP states "*This will outline the role that BECCS can play in reducing carbon emissions across the economy and set out how the technology could be deployed.*" Adjudication of the applicant's proposal should not take place until after the Biomass Strategy has been both published (currently due by the end of June 2023) and assessed by this application's Interested Parties.

Of my Deadline 6 submissions, that which refers to "Draft Overarching National Policy Statement for Energy (EN-1)" describes why the applicant's (and UK's) imports of woody biomass for power generation are particularly vulnerable to risks which adversely affect security of supply. As such, those imports conflict with an aim of PUB NZGP to "… reach our target in a way that protects energy security".

---

very substantial energy penalty likely on each of the two 600GW capacity generating units which would discharge post-combustion CO2 to the applicant's proposed carbon capture facility. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1149177/powering-up-britain-charts-tables.xlsx

[3] [redacted]

<u>Specific critique</u> - *"Net Zero Strategy""*

Paragraph 107 of the NZS states "*The interactions between different policies related to net zero are often highly complicated. These include trade-offs on land use, for example between tree-planting and biomass production…"* If the trade-offs are complicated, then it is clearly inappropriate for the applicant's current imports of woody biomass to be zero-rated and eligible for subsidy. In practice, it seems that, in order to quality for subsidy, all that the applicant needs to do is to show that an auditor has certified that the wood pellets which the applicant imports derive from somewhere in very wide region – for example, the south eastern USA – across which more carbon is being stored in trees of any quality and species on any type of land than the total amount of carbon which is being removed for milling.

It follows therefore that the NZS is right in stating, in paragraph 116 that "The Review recommends a significant increase in the use of data to report on what is really happening in net zero." – and if this disqualifies the supply chains of much of what the applicant currently burns, so be it.

Paragraph 151 of the NZS states "*Investors and firms that are seeking to invest in and drive the transition need to understand which activities in the economy are aligned with the transition, and which ones are not, to be able to allocate their capital accordingly."* "*For that they require common definitions, for example in the form of a taxonomy."* However, regardless of taxonomy, prospective investors would only risk their money on the applicant's proposed works if the level and robustness of subsidy relating to electricity generation and (false) negative emissions are sufficient.

Paragraph 153, 154 and 155 of the NZS refer to greenwashing, but not by government (for example, in relation to the zero-rating of the sort of imported woody biomass which comprises much of that which the applicant burns).

Concerning "international alignment" paragraph 158 of the NZS states "The UK should draw on its leadership in this field to shape standards internationally and adopt agreed ones as appropriate." However, the standard adopted by the UK government is, as mentioned above (in reference to paragraph 107), not fit for purpose, undermining the UK's claim of leadership.

Paragraph 347 wrongly assumes that all "sustainable biomass" (a term coined by the industry to greenwash) is the same, actually derives from a source which, locally, is being managed sustainably and has zero carbon debt. It states "*Sustainable biomass plays a key role in the net zero transition of the energy sector, as a resource for the production of low carbon fuels, renewable electricity and hydrogen. As an input for deployment of bioenergy with carbon capture and storage it could also generate negative emissions in the future.*" It also ignores the very substantial level of emissions associated not only with production and transportation of the sort of woody biomass which the UK is currently importing, but also foregone sequestration loss of soil carbon, ecosystem services etc.

Paragraph 348 states "*Sustainable biomass is considered a renewable low carbon energy source because the carbon it contains has only recently been removed from the atmosphere and can be regrown, in contrast to fossil fuels, where the carbon was sequestered millions of years ago*". Such rhetoric is misplaced in the context not only of the imported woody biomass which is burned at Drax and Lynemouth power stations, but also the probability that the weight of that biomass exceeds the total for all other biomass which is burned in the UK for energy (consequently justifying woody biomass having the greater policy priority).

In the context of woody biomass fuel for substantial power stations, paragraph 351 greatly understates reality by asserting that "*.... the UK's use of bioenergy is growing faster than its supply from domestic sources, pointing to possible future increased dependence on other countries for this energy source*." Almost all the woody biomass which the UK's two such power stations (at Drax and Lynemouth) burn comprises imports.

Footnote xv on page 114 of the NZS suggest a need for BECCS to deliver well over half the UK's negative emissions from engineered greenhouse gas removals. This conflicts with claims by proponents of the Direct Air Carbon Capture and Storage who suggest that their technology will be more effective, has negligible supply chain emissions and will be less costly.

The applicant has tried to use annual crops grown in the UK but has found this so much less commercially viable than importing wood pellets that paragraphs 354 and 663 of the NZS (which consider increased UK production of biomass) lacks relevance to the applicant's proposal.

Paragraph 435 refers to a need for "*analyses to validate net-negativity of power BECCS and the sustainability of biomass fuel*." As such, the NZS tends to confirm that fundamental doubts about power BECCS and the sustainability of biomass fuel have real merit.

Paragraph 436 wisely refers to a need for internationally accepted monitoring, reporting and verification system. Presumably therefore, the draft DCO should require compliance with such a system. However, there are none – reflecting global scepticism about the technology.

Paragraph 606 and others advocate that the burning of biomass should be a last resort, after use in other products first. This would be rather more feasible if the biomass derives from the UK than if it is imported.

Paragraph 664 rightly raises concern that the availability of suitable biomass decreases with climate change – compounding risks to security of supply.