

Comments on responses to the ExA's ExQ1

**UKWIN'S D3 COMMENTS ON NLGEPL'S
RESPONSES TO THE EXA'S EXQ1
(REP2-033)**

Proposed Development:

North Lincolnshire Green Energy Park

Proposed Location:

**Flixborough Wharf, Flixborough Industrial Estate,
North Lincolnshire**

Applicant:

North Lincolnshire Green Energy Park Limited

Planning Inspectorate Ref:

EN010116

Registration Identification Ref:

20031828

JANUARY 2023



UKWIN'S COMMENTS ON THE APPLICANT'S REP2-033 RESPONSES TO EXQ1

ExQ1	Applicant's REP2-033 Response	UKWIN Comments
Section 1 - General and Cross-topic Questions		
<p>Q1.0.22 Energy generation The ERF as proposed could generate up to 95Mwe. Within Chapter 3 [APP-051] the energy necessary to operate the ERF is specified as a parasitic load of 9.5 MWe. The energy necessary for the other elements of the plant are set out in MWh or MWe per annum or no figure is provided. (i) It would be helpful to understand the quantity of energy that will be required by the different elements of the project relative to the output of the ERF. Please provide a table setting out the breakdown of this information.</p>	<p>(i) A table is provided below, based on ES Chapter 3 [APP-051] and the values that the Applicant has committed to. These loads are unlikely to be coincident, and assume a worst-case value (i.e the electrolyser operating at peak load).</p>	<p>95 MW generation and 60.8 MW consumption would mean that the plant would only have net generation of around 34.2 MW. This means that the vast majority of the power that would be generated by the plant could be used on-site rather than being exported to the grid.</p> <p>The Applicant's figure does not represent 'worst-case' values. For example:</p> <p>(1) No consideration appears to have been given to the increased electricity consumption that would be required in the event captured CO2 is compressed to be sent to a pipeline or liquified for road transport.</p> <p>(2) A figure of 95 MW generation is used. APP-051 paragraph 3.2.2.3 (on pages 51-52) refers to the plant "generating up to 95 MW" (<u>emphasis added</u>). This implies the actual level of generation could be less than 95 MW. According to APP-044 (p. 12) and APP-054 (p. 31) the Applicant's R1 and climate assessments assumed gross generation of only 91 MW. Even this lower figure could be too high. As noted in REP2-109 and REP2-110, incineration plants can operate significantly below their theoretical maximum 'plated' generation capacity. Evidence in REP2-110 (page 49) shows that when comparing headline generation capacity and actual megawatts of energy generated for electricity-only incinerators in England in 2020 the gross generated was 15% lower than the plated capacity. This means that a typical 95 MW EfW plant would have generated an average of only 80.75 MW in 2020.</p>

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Section 6 - Climate Change		
<p>Q6.0.1 Committee on Climate Change</p> <p>Reference is made in [APP-054] Chapter 6 Climate, to the Committee on Climate Change Report (2020). A further progress report was presented to Parliament on 25 June 2021.</p> <p>(i) Are there implications of the progress report which could be regarded as important or relevant for the Proposed Development?</p>	<p>(i) No, the progress report of the CCC reinforces the key conclusions with respect to waste in its 2020 report. Principal amongst these are the need to divert waste, and in particular biodegradable components of waste, from landfill, and to raise the waste recycling rate.</p>	<p>The Applicant's reference to the CCC's position on the need to divert biodegradable waste from landfill is misleading because it fails to note that the CCC subsequently made clear in their 'Policies for the Sixth Carbon Budget and Net Zero' published in December 2020 that diverting biodegradable waste from landfill "should be achieved via prevention, reuse and recycling, <u>not via more energy-from-waste</u>" (emphasis added) (page 184, left margin summary).</p> <p>That document goes on to say, at page 186, that "An expansion in Scottish EfW capacity occurred ahead of their original 2021 biodegradable municipal waste ban date, and a repeat of this should be avoided (across the UK), due to the risk of locking-in increased EfW fossil emissions". This is relevant to the Proposed Development because even with the tokenistic smidgeon of carbon capture proposed, the North Lincolnshire incinerator would risk locking-in increased EfW fossil emissions.</p> <p>The Applicant is incorrect to state there is nothing important or relevant in the 25 June 2021 Progress Report to Parliament.</p> <p>As noted in UKWIN's WR [REP2-110], the statement page 129 of 'Progress in reducing emissions' (CCC 2021 Report to Parliament) expresses the CCC's concerns that "If EfW usage is left to grow unchecked, EfW emissions will quickly exceed those of the CCC pathway while <u>undermining recycling and re-use efforts</u>" (emphasis added).</p>

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		<p>This is clearly relevant for the Proposed Development, especially in light of UKWIN's evidence that the proposal could result in creating or exacerbating incineration overcapacity whilst undermining achievement of the Government's recycling and re-use efforts.</p> <p>It is also highly relevant to the Proposed Development that, as per page 2 of REP2-105, the CCC's June 2022 Progress Report to Parliament warned "action is required to avoid an over-reliance or over-capacity of incineration".</p> <p>REP2-105 also refers to the CCC's Table 11.4 (page 394) listing of "Significant growth in the use of Energy from Waste / incineration" as a 'major risk' to achieving our climate ambitions, noting that "The use of Energy from Waste / incineration is now more prevalent than recycling in England, and has driven an increase in waste emissions in the years before the COVID-19 Pandemic. Continued, unchecked growth could undermine the sector's contribution to UK emissions targets and efforts".</p> <p>To mitigate this risk the CCC highlighted the importance of considering whether or not incineration capacity built today would still be needed by 2050. The CCC makes clear that assessments of the need for capacity by 2050 should be based on a scenario that is "consistent with committed and proposed targets to improve recycling, reduce waste and reduce waste being landfilled..." and in line with the requirement set out in draft EN-3 that "new EfW should not be built unless they can demonstrate compatibility with waste treatment capacity needs and the waste hierarchy".</p>

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<p>Q6.0.2 Greenhouse Gas Emissions Guidance A revised IEMA Guide to Assessment Greenhouse Gas Emissions and Evaluating their Significance was published in February 2022; it contains updated guidance in respect of classifying the overall significance of effect for GHG impacts. (i) Can the Applicant explain what the implications of the revised guidance would be for the assessment of likely significant effects presented in ES Chapter 6 Climate?</p>	<p>IEMA's updated guidance would not materially affect the assessment method adopted, nor the results presented. In the EIA context, the update provides relative significance descriptions to assist assessments, describing five distinct levels of significance which are not solely based on whether a project emits GHG emissions alone, but how the project makes a relative contribution towards achieving a science-based 1.5°C aligned transition towards net zero. The carbon balance for the facility shows a net reduction in greenhouse gas emissions as a result of avoiding the landfill of residual waste, and as a result of recovering materials and energy that offset those from other sources. The IEMA guidance significance criteria describe a project that causes GHG emissions to be avoided or removed from the atmosphere having a beneficial effect that is significant.</p>	<p>The revised IEMA guidance serves to highlight the importance of the Applicant's failure to rule out the prospect that their proposal could have higher GHG impacts than alternative waste treatment and alternative electricity generation options.</p> <p>As set out in UKWIN's REP2-110 Written Representation, there are numerous instances where the Applicant scoped out adverse GHG impacts of the proposed development as insignificant even though, on their own or in conjunction with other factors, they could have changed the outcome of the assessment.</p> <p>In terms of assessing the effects of the development, the updated IEMA guidance retains the guidance that the top tier of the 'mitigation hierarchy' is the consideration of the 'do not build' option, which requires one to "evaluate the basic need for the proposed project and explore alternative approaches to achieve the desired outcome/s". The importance of this is highlighted on page 65 of REP2-109, which noted, with respect to this element of the IEMA guidance, that "Given the drive to support the top tiers of the waste hierarchy (reduction, preparation for re-use and recycling) and to minimise the adverse climate change impacts of waste management, it is not appropriate to simply assume that waste that is incinerated would otherwise be sent untreated to landfill".</p> <p>Page 64 of REP2-109 also highlights the importance of considering UK grid decarbonisation set out in the previous IEMA guidance, and this is retained in the current IEMA guidance. As set out in UKWIN's WR [REP2-110], the Applicant fails to adequately consider grid decarbonisation.</p>

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<p>Q6.0.4 Carbon Capture As currently drafted the timing of delivery for the Carbon Capture Utilisation and Storage (CCUS) and Concrete Block Manufacturing facility (CBMF) as set out under Requirement 18 allows for a 6 month and then an additional 12 month period prior to each element being commissioned.</p> <p>i) Please explain if the ES has assessed the ERF operating for these periods without these elements in place and where these calculations are set out.</p> <p>ii) If this is not the basis of the ES assessment, please explain what the basis was and any implications for the findings of the ES that may result.</p> <p>iii) In the event of a delay in completion of either element, please explain what implications there could be and if this would remain within the assessment of the ES...</p>	<p>...(ii) The assessment represents a case where CCUS and the CBMF are operational...Over the 25-year lifetime of the facility, a maximum 18 month period where neither facility is in operation is the equivalent of a reduction in benefit of <4800 tCO₂e per year. Where the ash is recovered at a similar facility off-site, the 37,680 tCO₂e benefit would still be secured, although offset by the impact of transport. The reduction in benefit associated with only CCUS operations being delayed by 18 months is <26000 tCO₂.</p>	<p>Given the marginal nature of the benefits claimed by the Applicant, these potential reductions in benefit over the lifetime of the proposed development cannot be considered insignificant.</p> <p>Instead, the reduced level of claimed benefit should be added to the list of known factors that, when taken alone or in combination with other factors, serves to completely eliminate any claimed climate benefit of the proposed development, resulting in the prospect of the proposed development being accompanied by the prospect of climate harm, i.e. delivering a relative net adverse GHG impact.</p>

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Section 7 - Compulsory Acquisition, Temporary Possession and other Land or Rights Considerations		
<p>Q7.1.41 Refuse Derived Fuels (RDF)</p> <p>(i) The description of Work No 1. includes 'an electricity generating station fuelled by RDF'. Is RDF defined in guidance/legislation or other form of document which the ExA can rely upon to understand the standard / constituent parts of the fuel and how this then might influence the outcomes considered in the ES for example in respect of air quality?</p> <p>(ii) Is the content of RDF monitored and if so by whom?</p>	<p>(i) RDF is defined by the EA...drawing on the European Waste Code list of wastes as code 19 12 "wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified" and sub-code 10 "combustible waste (refuse derived fuel)" The facility will receive RDF from a range of sources where sorting and separation has been carried out..As the specific waste types will be more particularly defined in the Environmental Permit, we consider it is preferable to cross refer to the specific controls on waste types that will be detailed in the Permit using appropriate EWC codes to ensure the facility meets the waste hierarchy and doesn't accept recyclable wastes.</p> <p>(ii) Periodically, RDF delivered to the facility would be sampled for compositional analysis...</p>	<p>The Applicant's revised RDF Supply Assessment (REP1-006) looks at waste with a wide variety of EWC codes (as set out on pages 46 and 47 of REP1-006 Appendix A) that go well beyond the EWC code for RDF, which as noted by the Applicant is code 19 12 10.</p> <p>Even if the plant were restricted to accepting only waste with the 19 12 10 EWC code, this would not guarantee that the plant would not adversely impact on recycling.</p> <p>As set out in UKWIN's evidence, RDF can contain recyclable material and incineration overcapacity can harm recycling.</p> <p>Additionally, as can be seen from the Wheelabrator Kemsley North decision, the mere fact that a proposed facility would require an Environmental Permit to operate does not preclude a finding that a proposed EfW plant would be likely to divert material from recycling and not just from landfill.</p> <p>Within the context of air quality, items most likely to result in emissions spikes include PVC (including textiles containing PVC), lithium batteries (which can cause fires), and nitrous oxide cannisters. Periodic (or indeed annual) compositional analysis of the incoming RDF would be inadequate to prevent PVC, lithium batteries, and/or nitrous oxide cannisters from being part of the feedstock.</p> <p>As previously noted by UKWIN, the Applicant's RDF Feed Supply Assessment does not adequately account for the availability constraints associated with imposing exacting feedstock specification requirements.</p>

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Section 14 - Policy		
<p>Q14.0.2 Planning Policy – Waste</p> <p>v) The RDF Supply Assessment at Tables 6 and 7: What would these Tables show if the assessment was carried out only for the RDF as specified, for the NLC area only, NLC and neighbouring waste authorities, England, and a proximity value put forward in guidance?</p>	<p>(v) The RDF Supply Assessment was based on...</p>	<p>The Applicant appears to be debating the question rather than answering it. While the Applicant might not like the framing, we would find it helpful for them to show the impact on their RDF Feedstock Supply Assessment, both individually and in-combination, of restricting their feedstock to RDF as specified, and of restricting the feedstock source to only the NLC area. REP2-039 and REP2-040 are of little value in responding to these questions. The documents are out of date, fail to actually assess likely available feedstock, and tend to suffer from some of the same flaws as identified by UKWIN at Deadline 2 in relation to the RDF Feedstock Supply Assessment and Planning Statement.</p>
<p>Q14.0.3 Electricity Generation</p> <p>In NPS EN-1 at paragraph 3.2.3 the policy indicates that the IPC (now SoS) should attribute substantial weight to the consideration of need, with the weight attributed to on considerations of need in any given case being proportionate to the anticipated extent of a project's actual contribution to satisfying the need.</p> <p>i) In this case should this be the net generation – indicated at Table 6 of [APP- 054] to be 641,896 MWh/yr as opposed to the gross output assumed to be up to 95 MW?</p>	<p>...The net generation per year is 641,896 MWh...</p>	<p>According to page 4 of the Government's EfW Guide: "The important factor to consider is the overall efficiency, net of any energy required to run the process". This means net generation figures should be favoured over gross figures, and the plant should not be rewarded for its parasitic load.</p> <p>The 'net' figure of 641,896 MWh is based on 91 MW generation minus a 9.5 MW parasitic load associated with the electricity for SCR and carbon capture. As such, the 641,896 MWh does not take into account other energy demands listed in response to Q1.0.22 such as the 30 MW associated with batteries; 10.81 MW for hydrogen production; 3.8125 MW for the PRF; and 3.45 MW for electric vehicle charging. This is alluded to in the fact APP-054 page 32 provides a lower figure of 608,880 MWh/year "Electricity export: go grid and other uses", with the associated footnote stating that "Other uses may include hydrogen production and battery storage".</p> <p>Furthermore, as UKWIN notes above with respect to Q1.0.22, the 91 MW figure may itself be overly optimistic.</p>