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## **DEADLINE D4 SUBMISSION**

I am an independent researcher and environmental consultant, working at the intersection of science, policy, and law, particularly relating to ecology and climate change. I work at a consultancy called Climate Emergency Policy and Planning (CEPP).

**In so far as the facts in this statement are within my knowledge, they are true. In so far as the facts in this statement are not within my direct knowledge, they are true to the best of my knowledge and belief.**

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## 1 PROCEDURAL ISSUES

### 1.1 Rule 17 letter, 10<sup>th</sup> September 2024

- 1 In response to the ExA's letter on the recent guidance on AI, I confirm that I have not used AI to create or alter any part of my documents, information or data, submitted to this Examination to date. I note the requirement to clearly identify the use of AI in any subsequent submissions.

### 1.2 Response to AS-030

- 2 The Applicant's submitted a response to my Written Representation [REP2-046] on November 1, now in the examination library under the code AS-030 as an additional submission. I have written to the Examining Authority explaining that a response from me by Deadline D4 is not possible given the limited time to available (and complexity of the issues). I will make best endeavours to respond by Friday December 13<sup>th</sup>, and I understand that ExA will decide to accept it an additional submission or defer it to a Deadline 5 submission.

## 2 INTRODUCTION

### 2.1 Appendices

- 3 For clarity, I continue the alphabetic sequencing of Appendices from my D2 and D3 submissions (so appendices for this document start at "V").

### 2.2 Deadline 4 (D4)

- 4 This is my submission for Deadline 4. It is a written summary of CEPP's oral submissions made at the ISH2 on November 14<sup>th</sup>: these were in Part 1 of the ISH2<sup>1</sup>. It fulfils the ExA's action point ISH2-AP1.
- 5 Throughout this document, dDCO refers to [REP2-004], Document Reference: 4.1: Draft Development Consent Order, Rev 2, October 2024 .

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<sup>1</sup> Transcript [EV6-002]. Recording [EV6-001].

### 3 THE TWO MATTERS

- 6 In this submission, I propose four simple changes to the dDCO covering two matters as below. Illustrative drafting of these changes is given in Appendix V of this document.
- 7 I first proposed DCO changes on these two matters at section 10 of my WR [REP2-046] where in summary I requested the ExA consider:

(A) **[the first matter]** a similar provision to that in the Net Zero Teesside DCO on carbon capture so that a minimum capture rate is secured in the DCO itself. The capture rate described in the Environmental Statement (Chapter 19 [APP-072]) is 95% and CEPP is proposing that this is the capture rate used in the dDCO, so that the DCO description of the project aligns with the assumptions in the development's Environmental Impact Assessment.

In CEPP's proposed dDCO changes, a clause is also added to secure the carbon storage itself when the development is in commercial operation as the carbon capture rate can only be secured if the carbon is subsequently stored.

(B) **[the second matter]** a further provision to secure, in the DCO, the Applicant's proposed design of the H2Teesside plant as being compliant with the LCHS standard. My proposed changes in Appendix V specify this in terms of the development itself being designed to satisfy all of the Conditions of Standard Compliance of the Low Carbon Hydrogen Standard (LCHS) when in commercial operation.

- 8 The reason for CEPP's request for these changes to the dDCO is that the Environmental Statement (ES) has been provided, under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ("the 2017 Regulations"), to identify, describe and assess the effect of the development on the environment. ES Chapter 19 [APP-072] on "Climate Change" describes and identifies that the development is proposed to operate in two specific ways:

(A) first, at an operational carbon capture rate of 95%; and,

(B) secondly, that the development will produce a "low carbon" hydrogen product that is in compliance with the Low Carbon Hydrogen Standard (LCHS) [REP2-020, Appendix 1]. Specifically based on the development's operational assumptions in the ES, the Applicant calculates that the development has an LCHS emission factor of 16.62 gCO<sub>2</sub>e/MJ<sub>LHV</sub> compared to the LCHS threshold of 20 gCO<sub>2</sub>e/MJ<sub>LHV</sub> [APP-072, 19.5.69]

- 9 These features of the proposed development are fundamental to its planning merits and are the basis upon which the application is currently being assessed for development consent. Therefore, the planning examination process must determine how these features can be secured. If the planning process does not do that, then development consent may be approved for a development which cannot be guaranteed to operate as described in the application and environmental statement.
- 10 It follows, then, that these properties of the development must be secured either by the DCO itself, or by a complementary regulatory regime which can be shown before development consent to be functionally capable of the same objective.

#### 4 ENVIRONMENTAL PERMIT (EP)

- 11 The section considers the EP which the applicant has proposed as the complementary regulatory regime to secure a carbon capture 95% rate in line with the Environmental Statement (ES).
- 12 As an example to assist discussion, the applicant has provided the Net Zero Teesside (NZT) EP at [REP2-027], Appendix 1. It is permit number: EPR/PP3501LR; issue dated: 14/05/2024.
- 13 The applicant claims for H2 Teesside that “... *the mechanism for achieving the capture rate is the Environmental Permit*” [AS-030, section 5.2.6]. As there does not yet exist an EP for H2Teesside, the Applicant has provided the NZT EP “*as the next best thing*” [EV6-001, 1.16.64]. That is, the NZT EP has been provided to the examination as the model of how the H2 Teesside EP would be drafted and operate.
- 14 As far as greenhouse gases and carbon capture rates, CEPP’s view is that the Environmental Agency’s (EA) EP regime provides for monitoring and reporting, but it does provide the pollution control function of securing a carbon capture rate of 95% (or any other rate).
- 15 CEPP has inspected of the conditions in the NZT EP, and the summary below supports CEPP’s description of the EP regime in the previous paragraph. My investigation shows that:
  - (A) The NZP EP includes requirement **PO2** for NZT’s operator to provide a methodology to demonstrate the carbon capture efficiency of the plant (Pre-operation condition, under Table S1.4 Pre-operational measures [REP2-027, PDF page 21]. Once approved this methodology is intended to measure carbon capture efficiency as required in Table S3.3 of the permit.
  - (B) It includes a requirement for NZT’s operator to provide a report on carbon capture efficiency under normal operation average over one year and within 15 months from the completion of commissioning (Improvement condition, **IC10**,

under Table S1.3 Improvement programme requirements [REP2-027, PDF page 20].

- (C) Should the normal operating conditions carbon capture efficiency reported be less than the design capture performance specification of 95% (in the **IC10** report) [REP2-027, PDF page 20]:

*“the Operator shall carry out an analysis of the issues affecting the performance of the plant with respect to achievement of the 95% carbon capture rate and either;*

- propose remedial actions for approval by the Environment Agency designed to improve capture efficiency, or;*
- provide an acceptable justification to the Environment Agency that a 95% capture rate is not reasonably achievable and that no further remedial action is to be taken. ”*

- (D) It includes a requirement for “*continuous*” measurement of “*carbon capture performance*” (as “*carbon capture efficiency (%)*”), both during normal operation and during start-up and shutdown (Table S3.3 Process monitoring requirements [REP2-027, PDF page 41]).

- (E) Section 4.2.2 [REP2-027, PDF page 11] requires an annual report (or reports) which include as a minimum:

- “ ...*  
*(e) The function and monitoring of the carbon capture plant in a format agreed with the Environment Agency. The report shall, as a minimum requirement give an account of the running of the process (including a summary of records of process monitoring requirements of table S3.3), the emissions into air compared with the emission limits in table S3.1 and S3.1a, and details of the waste generated.”*

- (F) The EP was issued on 14/05/2024 which is after the EA guidance “Post-combustion carbon dioxide capture: emerging techniques” was downgraded from “Best Available Technology” (BAT) status to “emerging technique” on 27/03/2024 (provided at Appendix X, see page 22). Despite this downgrading, the EA decision document (provided in Appendix W) claims that “*we have reviewed the Application against the Post Combustion carbon dioxide capture: Best available techniques (BAT) guidance*” and refers to the guidance as still being BAT status. It is clear that the EA was unable to review the permit application against the BAT guidance as it had been downgraded and did not exist when the decision was made 14/05/2024 (see Appendix W, PDF page 27).

- 16 Given this inspection of the EP, and as stated at the ISH2, CEPP is not aware of any indication, much less assurance, that the proposed development’s Environmental Permit will require that the hydrogen production facility is operated only:
- (A) when the project’s carbon capture infrastructure is also in operation; and
  - (B) at a particular capture rate or otherwise; and
  - (C) that the carbon capture infrastructure will be connected to the relevant infrastructure to export captured carbon dioxide to the offshore storage network.
- 17 On point (B) above, the NZT EP allows for “justifications” to be made to the Environment Agency on why a 95% capture rate has not been achieved (and is not “reasonably achievable”) without further remedial action being taken [REP2-027, PDF page 20] following the **IC10** report.
- 18 This is a “get out of jail free” pass for the development to operate in a way that is not consistent with the description of the scheme and planning merits under this NSIP DCO planning examination for development consent. It alone is evidence that the EP regime is not functionally capable of securing the properties of the development as they are described in the application.
- 19 Further to this, I made these points at the ISH2:
- (A) Document 9.2 [REP1-013] “Statement of Common Ground between H2 Teesside Limited and the Environment Agency” does not list the carbon capture rate (point (B) above), nor the other two matters above (points (A) and (C)), as a matter under section 4.0 “Matters under Discussion” [already noted by CEPP in REP3-017].
  - (B) As already noted by CEPP in comments on the Applicant’s response to Q.1.5.6 [REP3-017], the EA documents quoted by the Applicant are not at Best Available Technology (BAT) as claimed.
    - (a) “Post-combustion carbon dioxide capture: emerging techniques”, Environment Agency, 2021 has been downgraded to “emerging technique” guidance [provided at Appendix X]<sup>2</sup>.
    - (b) “Hydrogen production with carbon capture: emerging techniques”, Environment Agency, 2023 was only ever published at the status of

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<sup>2</sup> <https://www.gov.uk/guidance/post-combustion-carbon-dioxide-capture-best-available-techniques-bat>. Last updated, 27 March 2024 version.

“emerging technique” guidance (ie: not at BAT status in the first place) [REP2-023, Appendix 3]<sup>3</sup>;

In both documents, the 95% capture rate is discussed as an aspiration, no evidence is given that it can be achieved, or how it will be achieved. Worldwide, there is no evidence given that it can or has ever been achieved. Substantive evidence of this was given in my Written Representation [REP2-046, eg: at section 3.1 “The limitations of the carbon capture technology”].

As at document 8.17a [AS-030], 5.2.7, the Guidance merely says “*You should design plant to maximise the carbon capture efficiency. As a minimum, you should achieve an overall CO2 capture rate of at least 95%, although this may vary depending on the operation of the plant*”.

- (C) Even if the relevant EA documents were “BAT” documents, the BAT regime would only impose broadly determined and applicable ambitions for this technology which is without precedent in the UK. However, both guidance documents are firmly at the status of “emerging technology” indicating very considerable uncertainty as to its capability. In any case, I have shown above, these ambitions are not enforceable outcomes.
- (D) As EA permitting is only based on guidance at “emerging technology” level, the standards for the CCS techniques are more speculative and not proven. The EP is not a mechanism of achieving the proposed capture rate – at best, the EP regime monitors and reports the capture rate. It allows the operators to justify under-performance in any case.
- (E) Therefore, CEPP considers there is a need for the dDCO to include provisions that secure the capture and storage of carbon dioxide produced by the hydrogen production plant in line with the assumptions in the environmental statement that purports to describe the development for environmental assessment.
- (F) As shown above the EA permitting regime does not secure the development operating as described in the application. Therefore, the provisions proposed by CEPP in the DCO would make no regulatory duplication between the DCO and the EA permitting regime.

20 Given that there is no regulatory duplication, section 4.12 of the Energy NPS EN-1 (sections 4.12.10 and 4.12.16 as quoted by the Applicant) does not engage.

21 This is also evidenced by the DCOs for Keadby 3 and Net Zero Teesside already containing DCO requirements and definitions similar to those being proposed by

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<sup>3</sup> <https://www.gov.uk/guidance/hydrogen-production-with-carbon-capture-emerging-techniques>, Published, 3 February 2023 version.

CEPP. If these DCO changes duplicated another regulatory regime, the SoS in those cases would not have allowed them.

## 5 PROPOSED CHANGES FOR THE FIRST MATTER

22 Changes 1 and 2 in Appendix V are proposed for the first matter. These changes secure the three points above. That is, the changes secure that when hydrogen production is in operation:

(A) the project's carbon capture infrastructure is also in operation; and

(B) it operates at the 95% capture rate; and

(C) will be connected to the relevant infrastructure to export captured carbon dioxide to the offshore storage network.

23 This is as the development is described to operate in the application, but is currently not secured in the dDCO.

### 5.1 *Comments on what the Applicant said on the first matter at ISH2*

24 The Applicant said that it does not consider any drafting or controls are required in the DCO for carbon capture as 95% capture rate will be required under the EP and that it is technically achievable.

Both points are wrong as shown above. The EP does not provide a functionally capable mechanism to require the plant operates at 95% carbon capture when in commercial operation. The Applicant has provided no evidence that 95% capture rate is achievable in practice (see [REP2-046, eg: at section 3.1 "The limitations of the carbon capture technology"]).



25 The Applicant said that “CEPP mischaracterised” the Net Zero Teesside and Keadby 3 DCOs, and implied that CEPP is seeking something additional to what these DCOs ordered. This is not the case as can be seen by comparing the CEPP proposed changes in Appendix V with those in the NZT DCO and Keadby 3 DCO, as shown below.

(A) Keadby 3 DCO under Article 2 “Interpretation”:

*“carbon capture and compression plant” means the building and associated works comprised in Work No. 1C and Work No. 7 in Schedule 1 shown on the works plans and which are designed to capture, compress and export to the National Grid Carbon Gathering Network, a minimum rate of 90% of the carbon dioxide emissions of the generating station operating at full load;’*

(B) NZT DCO under Article 2 “Interpretation”:

*“CCP” means the carbon capture plant, which is designed to capture a minimum rate of 90% of the carbon dioxide emissions of the generating station operating at full load;’*

(C) CEPP proposal under Article 2 “Interpretation” [Change 1]:

*“carbon capture enabled hydrogen unit” means a hydrogen production facility which when operating in commercial production, is designed to capture a minimum rate of 95% of the carbon dioxide emissions ’ ;*

(D) Keadby 3 DCO under Requirement 33 (3) (“Carbon capture and compression plant”):

*“Work No. 1A may not be brought into commercial use without Work No. 1C and Work No. 7A also being brought into commercial use.”*

(E) NZT DCO under Requirement 31 (C) (“Carbon dioxide transport and storage”):

*“Work No. 1A may not be brought into commercial use without Work Nos. 1C, 7 and 8 also being brought into commercial use and Work No. 8 being connected to an operational storage site.”*

(F) CEPP proposal under Requirement 27 (“Carbon dioxide transport and storage”) [Change 2]:

*“Neither Work No. 1A.1, nor Work No. 1A.2, may not be brought into commercial use without Work No. 7 being connected to an operational storage site.”*

The CEPP proposed changes for the first matter for the H2 Teesside DCO are functionally equivalent to those in the Keadby 3 and NZT DCOs.

- 26 The Applicant also said<sup>4</sup> that CEPP had not grappled with or acknowledged that for none of the three DCOs, the SoS had thought it appropriate to include a “provision of the sort that he is asking for”. This is clearly false as shown above.
- 27 The Applicant said that the Secretary of State had decided to grant consent to three projects Net Zero Teesside, Keadby 3 and Drax BECCS “*without the need to include a requirement for a 95% or indeed any other capture rate to be achieved. The draft order here is consistent with those precedents.*”. This is not the case as the DCOs for two of the projects, NZT and Keadby 3, each define (albeit in slightly different wording) the development in terms of being designed to capture a minimum rate of 90% of the carbon dioxide emissions.
- 28 With respect to Drax BECCS, the Applicant stated at AS-030, 5.2.2:

*“The Applicant would also note that this issue was considered on the Drax BECCS project (following similar submissions by CEPP) which also based its assessments on a 95% capture rate”.*

This was also stated orally at the ISH2.

The assertion that I made “similar submissions” (ie requesting DCO changes) at the Drax BECCS DCO examination appears to be an invention of the Applicant. I have checked back, and the above statement is false. Further I have checked the Examiner’s Report and the Decision letter for Drax BECCS, and similarly find no evidence for the above statement: DCO modifications of the form discussed here are not mentioned at all and were not requested by myself or any other IP or party.

**I request that Applicant provides evidence that I made “similar submissions” to the Drax BECCS examination, or formally retracts these statements and corrects the record for this examination.**

The reason why the Drax BECCS DCO does not have similar provisions is that it was never raised as a matter at the examination. Consequentially, it was not put before the SoS, and far from not considering it appropriate, the SoS just simply did not consider it at all (as evidenced in the Drax BECCS Examiner’s Report and Decision Letter).

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<sup>4</sup> EV6-001, 1.15.00

29 The applicant said<sup>5</sup>:

*'The mechanism for ensuring a capture rate is achieved is the Environmental Permit and in considering the Environmental Permit for this project the Environment Agency will have regards to its February 2023 guidance on hydrogen production with carbon capture emerging techniques and the applicants environmental permit application has been based on meeting this guidance. In section 3.3 of the guidance, it states and I quote "you should design plant to maximise the carbon capture of at least 95% although this may vary depending on the operation of the plant". So the Environment Agency will have to consider whether this has been achieved in determining the applicants permit application.'*

Based on the example offered by the Applicant of the NZT EP, I have shown above why the EP provides for monitoring and reporting, but it is not functionally capable of securing a carbon capture rate of 95% in practice. What theoretical conclusions the EA comes to in advance of the development operating are not relevant.

Further, when deciding the EP for NZT, the EA agreed an EP which does not *"maximise the carbon capture of at least 95%"*. As above, the EP provides a process [REP2-027, PDF page 20] which allows for 95% capture to not be achieved without further remedial action being taken.

30 The Applicant said that the DCO should not duplicate controls that can be imposed through an alternative regime. I have shown that CEPP's proposed DCO changes do not duplicate controls in the EP regime, and there is no regulatory duplication proposed. Therefore, CEPP's proposed dDCO changes are consistent with EN-1 as described above.

31 The Applicant said<sup>6</sup>:

*"The 95% capture rate is used as an assumption for the purposes of the environmental impact assessment and not as a parameter for the project. In other words, it's not part of the Rochdale envelope. It's simply an assumption that is used in the EIA and it is neither necessary as a matter of law nor proportionate to secure every single assumption that goes into assessment. And that is an important legal distinction to keep in mind when looking at the question of securing things that are in the EIA that is appropriate in relation to parameters which define the project for which consent is to be granted and in relation to mitigation measures which are specified and have to be secured through the DCO as opposed to duplicating controls through other regimes or fixing every parameter that goes into the assessment. It is neither usual*

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<sup>5</sup> EV6-001, 56.53.

<sup>6</sup> EV6-001, 59.25

*nor necessary for assumptions of that sort to be reflected in a control in the development consent order itself.”*

The EIA identifies and describes the likely significant environmental effects of the development. Those effects provide a description of the project which is under examination at the DCO examination. The 95% capture rate is not just an assumption for the EIA: it is a description of the project for the EIA. If the capture rate is not achieved (as it never has been on any commercial CCS system yet operating, see my WR [REP2-046]), then the environmental effects of the project are different to those being assessed under the examination. In other words, the 95% capture rate is fundamental to planning merits of H2 Teesside and is the basis upon which the application is currently being assessed for development consent.

Therefore, it is CEPP’s view that the Applicant’s statement above invents “*an important legal distinction*” which does not actually exist.

32 The Applicant referred to Requirement 27 (“Carbon dioxide transport and storage”) which states that “*No part of the authorised development other than the permitted preliminary works may commence until evidence of the following (or such licence or consent as may replace those listed) has been submitted to and approved by the relevant planning authority— ... that the carbon dioxide storage licence has been granted;*”

33 However, the carbon dioxide storage licence does not necessarily secure that captured carbon will be stored whilst the project is in commercial operation. This is why CEPP proposes our Change 2 (Appendix V) that:

*“Neither Work No. 1A.1, nor Work No. 1A.2, may not be brought into commercial use without Work No. 7 being connected to an operational storage site.”*

34 Again, this proposed dDCO change is not regulatory duplication.

## 6 PROPOSED CHANGES FOR THE SECOND MATTER

35 Changes 3 and 4 in Appendix V are proposed for the second matter, relating to the Low Carbon Hydrogen Standard (LCHS).

36 The Low Carbon Hydrogen Standard (LCHS) is literally “what it says on the tin”. It is a standard not a control regime. It is designed for supporting a regime of payments for the operation of the scheme. It is not actually designed as a regime to enforce production at particular levels of greenhouse gas emissions.

37 The Applicant calculates the Low Carbon Hydrogen Standard (LCHS) emission factor for development from its description of the development in ES Chapter 19.

The emission factor is the metric used to assess compliance with the standard. In the ES Chapter 19, it is used to describe the hydrogen facility as low carbon. This is part of the description of the environmental effects of the project in the ES. Therefore, CEPP considers there is a need for the draft DCO to include provisions that secure the compliance with the LCHS in line with the assumptions in the ES.

- 38 In ES Chapter 19, the Applicant finds that LCHS-in-scope emissions for the development given a LCHS emission factor of 16.62 gCO<sub>2</sub>e/MJ<sub>LHV</sub> compared to the LCHS threshold of 20 gCO<sub>2</sub>e/MJ<sub>LHV</sub> [APP-072, 19.5.69]. In other words, the development is close to the threshold of the standard (less than 20% below). Failure of the development to operate in line with any of the assumptions in the ES may well lead to the development producing hydrogen at LCHS emission factors above the LCHS threshold and not compliant with the standard.
- 39 The Applicant itself notes that by just including non-LCHS-in-scope emissions (ie: those emissions which are included in the EIA assessment and description of the development, but are exempted from the LCHS calculations) breaches the LCHS standard at an emission factor of 21.64 gCO<sub>2</sub>e/MJ<sub>LHV</sub> [APP-072, 19.5.70].
- 40 CEPP considers multiple assumptions relating to greenhouse gases in the EIA to be unrealistic, and has provided substantial documentation on this [WR, REP2-046 and its appendices]. CEPP provided eight sensitivity tests in its WR of the EIA assumptions, and each one breached the LCHS standard [REP2-064, Table 1], some to a very considerable extent (in a percentage range of +60% to +425% in excess the LCHS standard threshold).
- 41 Currently there is nothing that requires that the hydrogen production facility is operated only in compliance with the LCHS. The LCHS allows for monitoring and reporting on a retrospective monthly and annual basis, but has no functional capability to enforce that the development operates within the standard (because it is not designed to do so in the first place).
- 42 Requiring security for LCHS compliance in the DCO complements but does not duplicate the LCHS itself.
- 43 The Applicant says that the H2 Teesside operator will not get paid when the development does not comply with the LCHS. Whilst this does provide a commercial incentive for commercial production of hydrogen to meet the LCHS, it is no guarantee that that will happen in practice.

## 7 CONCLUSIONS

- 44 The H2 Teesside development is currently being assessed for development consent on the basis on an environmental statement which describes the commercial operation development as capturing carbon at a 95% rate and as “low carbon” as demonstrated by compliance with the Low Carbon Hydrogen Standard (LCHS). These features are fundamental to its planning merits. Therefore, the planning examination process must determine how these features can be secured. If the planning process does not do that, then development consent may be approved for a development which cannot be guaranteed to operate as described in the application and environmental statement.
- 45 In both cases, there is no complementary regulatory regime which can be shown to be functionally capable of the same objective before development consent.
- 46 CEPP propose four simple changes to the dDCO (in Appendix V) to secure these features of the development.

## 8 SIGNED

Dr Andrew Boswell,  
Climate Emergency Policy and Planning, November 20th, 2024

**9 APPENDIX V – ILLUSTRATIVE DRAFTING OF CEPP PROPOSED CHANGES TO dDCO**

47 This illustrative drafting is based on Document Reference: 4.1: Draft Development Consent Order, Rev 2, October 2024 [REP2-004]

48 After noting that under Schedule 1 (“Authorised Development”):

(A) **Work No. 1A.1** and **Work No. 1A.2** are each defined [dDCO, Rev 2, page 37] as being a “*carbon capture enabled hydrogen unit*” of 600 MW; and

(B) that **Work No 7** is defined [dDCO, Rev 2, page 40] as being a “*a carbon dioxide export pipeline*”.

CEPP propose these 4 changes.

**49 Change 1**

Under Article 2 “Interpretation”, after “building” definition [dDCO, Rev 2, Page 6] add a new definition:

*“carbon capture enabled hydrogen unit” means a hydrogen production facility which when operating in commercial production, is designed to capture a minimum rate of 95% of the carbon dioxide emissions ’ ;*

**50 Change 2**

Under Requirement 27 (“Carbon dioxide transport and storage”) and after 27 (1) add new clause:

*“Neither Work No. 1A.1, nor Work No. 1A.2, may not be brought into commercial use without Work No. 7 being connected to an operational storage site.”*

**51 Change 3**

Under Section 2 “Interpretation”, add a new definition after “legible in all material respects”:

*“Low Carbon Hydrogen Standard (LCHS)” means the Low Carbon Hydrogen Standard, Version 3 or later.”*

## 52 Change 4

Under Section 2 “Interpretation”, make a further change to definition of “*carbon capture enabled hydrogen unit*” to say:

*‘ “carbon capture enabled hydrogen unit” means a hydrogen production facility which when operating in commercial production, is designed to capture a minimum rate of 95% of the carbon dioxide emissions and designed to satisfy all of the Conditions of Standard Compliance of the Low Carbon Hydrogen Standard (LCHS).’*

### 10 APPENDIX W: EP EPR/PP3501LR : Decision document

**Supplied as separate document**

### 11 APPENDIX X: Post-combustion carbon dioxide capture: emerging techniques

Environment Agency guidance, downloaded from GOV.UK on November 20<sup>th</sup> 2024

**Supplied as separate document**