



Government  
Legal Department

**THE DEPARTMENT FOR ENERGY SECURITY AND NET ZERO (DESNZ)**

**and**

**THE HEALTH AND SAFETY EXECUTIVE (HSE)**

## **MEMORANDUM OF UNDERSTANDING**

**This Memorandum of Understanding (which expression shall include the Annexes) (“MoU”) is dated 24<sup>th</sup> March 2025**

**Between**

- (1) **The Department for Energy Security and Net Zero (DESNZ)** (the **"Authority"**) acting on behalf of the Crown of 3 Whitehall Place, London, SW1A 2AW; and
- (2) **The Health and Safety Executive (HSE)** of Redgrave Court Merton Road, Bootle, Merseyside, L20 7HS (the **"Partner"**).

together the **"Parties"** and each a **"Party"**.

### **Background and Policy Context**

- (A) Whereas the Authority and HSE both have respective interest in the science and evidence base to inform the policy and regulatory landscape in the transition to NetZero. Both would benefit from accessibility to and collation of research and information emanating from a multitude of Joint Industry Projects [JIPs] that are being coordinated and delivered by third parties.
- (B) By the terms of this MoU, HSE shall join and participate in a number of JIPs, specified within the annexes, its participation fees paid for by the Authority but covering its own costs in relation to staff resource, time and other miscellaneous costs of participation. HSE shall share with the Authority, on a regular basis, any results, deliverables, reports and other information gained from its participation in the JIPs, to the level permitted by the terms of participation in each project.
- (C) This MoU establishes the responsibilities of the Parties and the general principles for their cooperation.
- (D) This MoU is not intended to be legally binding and no legal obligations or legal rights shall arise between the Parties from the provisions of the MoU. However, the Parties enter into the MoU intending to honour their obligations.

**NOW THEREFORE** the Parties have agreed to cooperate under this MoU as follows:

### **1. Interpretation**

- 1.1. Unless the context otherwise requires, references to this MoU shall be construed as a reference to this MoU as varied or amended in accordance with its terms. Reference to a person includes a legal entity, words importing a gender include all genders and words importing the singular include the plural

and vice versa.

**“Activities”** means agreed activities set out in Annex A and **“Activity”** shall be construed accordingly.

**“Crown”** means the government of the United Kingdom (including the Northern Ireland Executive Committee and Northern Ireland Departments, the Scottish Executive and the National Assembly for Wales), including, but not limited to, government ministers, government departments, government offices and government agencies.

**“Confidential Information”** means any information which has been designated as confidential by either Party in writing [or that ought to be considered as confidential] (howsoever it is conveyed or on whatever media it is stored) including information the disclosure of which would, or would be likely to, prejudice the commercial interests of any person or trade secrets and all personal data and sensitive personal data within the meaning of applicable legislation. Confidential Information shall not include information which:

- (a) was public knowledge at the time of disclosure (otherwise than by breach of a duty of confidence by either Party);
- (b) was in the possession of the receiving Party, without restriction as to its disclosure, before receiving it from the disclosing Party;
- (c) is received from a third party (who lawfully acquired it) without restriction as to its disclosure; or
- (d) is independently developed without access to the Confidential Information.

**“Data Protection Legislation”** means (i) the UK GDPR as amended from time to time; (ii) the Data Protection Act 2018 as amended from time to time; (iii) regulations made under the Data Protection Act 2018; (iv) all applicable law about the processing of Personal Data.

**“Intellectual Property Rights”** means patents, utility models, inventions, trade marks, service marks, logos, design rights (whether registrable or otherwise), applications for any of the foregoing, copyright, database rights, domain names, plant variety rights, know-how, trade or business names, moral rights and other similar rights or obligations whether registrable or not in any country (including but not limited to the United Kingdom) and the right to sue for passing off.

**“MoU Representatives”** means the lead representatives of each Party (one to be provided by each Party), as described in paragraph 4.

**“Personal Data”** and **“Processing”** have the meaning given in the UK GDPR.

**“Principles”** has the meaning set out in paragraph 3.

**“UK GDPR”** means the General Data Protection Regulation (Regulation (EU) 2016/679) as transposed into United Kingdom national law by operation of section 3 of the European Union (Withdrawal) Act 2018, together with the Data Protection, Privacy and Electronic Communications (Amendments etc.) (EU Exit) Regulations 2019.

## **2. Parties’ Responsibilities:**

- 2.1. HSE shall participate in the JIPs, and complete any other Activities as described in Annex A. The Authority will perform those activities identified in Annex B and shall make payments to HSE for the participation in the JIPS as per the funding terms in Annex C.
- 2.2. HSE and the Authority will ensure it complies with the terms of all applicable laws in carrying out the Activities.

## **3. Principles of collaboration and the Parties’ responsibilities**

- 3.1. The Parties will adopt the following principles (“**Principles**”) at all times in respect of this MoU:
  - (a) the Parties will:
    - (i) be accountable to each other for performance of their respective roles and responsibilities as set out in this MoU;
    - (ii) share information, experience, materials and skills to learn from each other and develop effective working practices, work collaboratively to identify solutions, eliminate duplication of effort, mitigate risk and reduce cost;
    - (iii) comply with the law and best practice, including any relevant Governmental protocols and guidance;
    - (iv) act in a timely manner;
    - (v) ensure sufficient and appropriately qualified employees and other necessary resources are available and (in the case of employees) authorised to fulfil the responsibilities set out in this MoU.

## **4. Liaison between the Parties**

- 4.1. Formal contact between the Parties will be through the MoU Representatives. The MoU Representatives are:

**The Authority:** **REDACTED** Deputy Chief Scientific Adviser

**HSE:** **REDACTED** Strategic Science Adviser for NetZero, HSE.

Either Party may change their MoU Representative at any time by notifying the

other in writing.

4.2. The MoU Representatives shall:

- (a) meet at least twice a year at a time and place to be mutually agreed to review the Activities carried out under, and the operation of, this MoU and to address any issues arising from this MoU;
- (b) provide assurance to the Parties that the Activities agreed between the Parties are being undertaken and that work is proceeding in accordance with the Principles; and
- (c) document key decisions in writing.

**5. Charges and liabilities**

- 5.1. Except as otherwise provided in this MoU, each Party shall bear its own costs and expenses incurred in complying with its obligations under this MoU.
- 5.2. Both Parties shall remain liable for any losses or liabilities incurred due to their own or their employees' actions and neither Party intends that the other Party shall be liable for any loss it suffers as a result of this MoU.

**6. Use of Third Parties**

- 6.1. HSE will seek written consent from the Authority before using any third party to perform any of the Activities.

**7. Intellectual Property Rights**

- 7.1. Any Intellectual Property Rights that arise from or are developed by either Party in carrying out the requirements of this MoU ("**Foreground IPR**") shall be vested in and owned by the Crown.
- 7.2. Both Parties will work together to ensure that in the performance of the Activities and the use of any Foreground IPR does not infringe any Intellectual Property Rights belonging to a third party. Where use of Intellectual Property Rights belonging to a third party is required to perform the Activities or to use any Foreground IPR, HSE will use reasonable efforts to secure licences for both Parties to use any such Intellectual Property Rights on an irrevocable, royalty-free, non-exclusive basis. Where this is not possible, HSE will agree with the Authority such other means to procure the performance of the Activities and use of Foreground IPR without infringing such rights, which may include modification of the Activities to avoid infringement.

**8. Freedom of Information and Communications to the Public**

- 8.1. Each Party will provide to the other Party any information in its possession that may be reasonably requested by the other Party, subject to any confidentiality constraints, safeguards and statutory rules on disclosure. Each Party will

consult the other Party before making to any third party any significant disclosures of information under the Freedom of Information Act 2000 and/or the Environmental Information Regulations 2004 in relation to this MoU.

- 8.2. The requirements in this paragraph 8 and paragraph 9 (Confidential Information) below are subject to any Government requirements as to transparency which may apply to either or both Parties from time to time.
- 8.3. HSE will be responsible for handling media inquiries relating to the Activities under this MoU. Each Party will seek the other Party's approval before publishing any information resulting from the use of exchanged data received from the other Party.

## **9. Confidential Information**

- 9.1. Each Party understands and acknowledges that it may receive or become aware of Confidential Information of the other Party (which may include information where the other Party owes a duty of confidence to a third party) whether in the course of performance of the Activities or otherwise.
- 9.2. Except to the extent set out in this paragraph 9 or where disclosure is expressly permitted elsewhere in this MoU, each Party shall treat the other Party's Confidential Information as confidential and safeguard it accordingly (which shall include complying with any protective markings on documents and instructions supplied by the other Party). In particular, neither Party will do anything that may place the other Party in breach of a duty of confidence owed to a third party. A Party receiving Confidential information shall not disclose Confidential Information to any non-Crown bodies without the prior consent of the other Party.
- 9.3. The obligations of confidentiality in this paragraph 9 shall continue in force notwithstanding termination of this MoU.

## **10. Protection of Personal Data**

- 10.1. The Parties will comply with their responsibilities under the Data Protection Legislation and will not use any Personal Data exchanged under this MoU for any purposes which are incompatible with the Data Protection Legislation. No data or information collated and/or exchanged under this MoU should be used for commercial purposes without the prior written agreement of the supplying Party (which use may be conditioned as the supplying Party sees fit).
- 10.2. Each Party must ensure that Personal Data collated or exchanged under this MoU is not transferred outside the UK without the prior agreement of the other Party.

## **11. Resolution of disputes**

11.1. Any dispute between the Parties arising out of or in connection with this MoU shall in the first instance be resolved amicably between the Parties through the MoU Representatives and, if no resolution is reached, referred to the following senior personnel (at least Director level):

- (a) **For the Authority:** REDACTED Chief Scientific Adviser
- (b) **For HSE:** REDACTED Director of Science and Chief Scientific Adviser.

## **12. Term and Termination**

12.1. This MoU shall commence on 24/03/2025 and (subject to earlier termination on the terms of this MoU) shall continue for three (3) years which may be extended by the written agreement of the Parties.

12.2. This MoU may be terminated by either Party at any time by giving written notice to the other Party.

12.3. A Party terminating this MoU further to this paragraph 12 will give as much notice as reasonably possible and will offer all reasonable assistance to ensure an effective handover of Activities, if required, and to mitigate the effects of termination on the other. In particular, a Party terminating this MoU shall take reasonable steps to ensure the other Party is not put at risk of action for breach of any statutory or other legal obligations as a result of terminating this MoU. This will include compliance with the further specific handover requirements set out below.

12.4. If for any reason this MoU is terminated, the Authority may:

- (a) give such directions to HSE for the purpose of making arrangements for the handover of Activities (whether the Authority will continue the Activities itself or seek to agree replacement services with a third party); and/or
- (b) authorise another party to take over all or part of the Activities as the Authority may specify.

12.5. HSE shall co-operate fully with the Authority during any handover arising from the expiry or termination of this MoU. Such co-operation shall extend to allowing full access to, and providing copies of, all documents, reports, summaries and any other information necessary, within legal constraints, to the Authority or such other third party (or parties) authorised to take over all or part of the Activities in order to achieve an effective transition without disruption to routine operational requirements.

## **13. Financial Consequences of exit from the MoU by an individual Party**

- 13.1. On termination of this MoU, there are no financial adjustment to be made, however upon termination HSE shall provide a final report detailing the Activities it has performed.

#### **14. Review and audit of the MoU**

- 14.1. In addition to the regular review meetings to discuss performance in accordance with paragraph 4.2, the Parties will review this MoU at least every year, and whenever substantial changes occur to the policies, external relationships and structures of the Parties concerned. Any changes to this MoU will only be effective if set out in writing and signed by both Parties.
- 14.2. Each Party shall keep and maintain until six (6) years after termination of this MoU, full and accurate records of the Activities and all sums received in respect thereof. Each Party shall on request afford the other Party or their representatives such access to those records as may be requested in connection with the MoU or as otherwise required in connection with audit requirements (including, without limitation, audit by the National Audit Office).

#### **15. Miscellaneous**

- 15.1. This MoU does not confer any rights on any third party. Nothing in this MoU shall be interpreted as limiting, superseding, or otherwise affecting any Party's normal operations in carrying out its statutory, regulatory or other duties. This MoU does not limit or restrict either Party from participating in similar activities or arrangements with other entities.
- 15.2. The Authority reserves the right to vary the requirements of the MoU should this become necessary at any time, following discussion with HSE. The Parties will confirm all agreed variations in writing.
- 15.3. If any such variations require an adjustment to the Activities or the fees payable then the Parties will seek to reach an agreement on how these variations should be managed and documented. The Authority shall have no obligation to incur any further costs under this MoU, nor shall HSE be required to perform additional Activities unless and until this has been agreed in writing.



## **SIGNATORIES**

The duly authorised representatives of the Parties affix their signatures below.

Signed for and on behalf of the Secretary of State for Department for Energy Security and Net Zero (DESNZ)

Signat **REDACTED**

Name: **REDACTED**

Position: Chief Scientific Adviser & Director General, DESNZ

Date: 31st March 2025

Signed for and on behalf of Health and Safety Executive (HSE)

Signature: **REDACTED**

Name: **REDACTED**

Position: Senior Contracts Manager, HSE Science Division

Date: 31st March 2025

## **Annex A. The Partner's Activities**

HSE will participate in a number of JIP's and the Authorities priority projects are detailed below. As the funding is not project specific HSE are able to participate in other JIP's subject to agreement and discussion with the Authority.

### **1. DNV: Materials in CCS wells**

DNV project lead: Ramgo Thodla Ramgopal.Thodla@dnv.com (DNV, Columbus, Ohio, USA)

Project website: <https://www.dnv.com/article/materials-performance-in-ccs-wells/>

#### **Aims**

- Define the windows of operation for different materials of interest in CCS operations, including down-hole tubulars, well-head components and intervention equipment
- Provide guidance on suitable CO<sub>2</sub> specifications, temperatures and pressures and/or guidance on material selection
- Develop framework in which to evaluate results from materials qualification tests

### **2. SINTEF: offshore subsea CO<sub>2</sub> releases**

SINTEF project lead: Paal Skjetne Paal.Skjetne@sintef.no

Team website: <https://www.sintef.no/en/expertise/sintef-industry/process-technology/subsea-release-of-co2/>

#### **Aims**

- Collect observations from subsea releases of dense-phase CO<sub>2</sub>, the dissolving plume, and the subsequent dispersion of dissolved CO<sub>2</sub> in the ocean column.
- Measure the ascent and dissolution of the bubble plume using video, 3D sonar, dye trace and pH.
- Compare measurements to model predictions using SINTEF SURE dispersion model

### 3. TWI: MASCO2T-II

TWI project lead: Sofia Sampethai [sofia.sampethai@twi.co.uk](mailto:sofia.sampethai@twi.co.uk)

Team website: <https://www.twi-global.com/media-and-events/press-releases/2023/join-our-new-supercritical-co2-transport-project>

#### Aims

- Identify, test and assess metallic materials (including welds) for service in environments containing impure CO<sub>2</sub>

#### Scope

- Generate corrosion data for candidate metallic materials in high pressure/supercritical CO<sub>2</sub>, with varying types and concentrations of impurities
- Assess impact of environmental factors (pressure, temperature, fluid composition etc.) on the corrosion behaviour of candidate metallic materials including welds
- Effect of stress on the environmental performance of candidate metallic materials and welds

### 4. DNV: Mastering CO<sub>2</sub> Composition

DNV project lead: Vincent Zwanenburg [Vincent.Zwanenburg@dnv.com](mailto:Vincent.Zwanenburg@dnv.com) (DNV Netherlands)

Project website: <https://www.dnv.com/article/mastering-co2-fluid-compositions/>

#### Aims

- Develop guidance on CO<sub>2</sub> quality monitoring for CCUS projects

#### Scope

- Assess performance of measurement techniques for CO<sub>2</sub> impurities, including the development of reference systems
- Phase 1: Gaseous CO<sub>2</sub>, Phase 2: Dense-phase CO<sub>2</sub>. Tests include range of temperatures, including refrigerated CO<sub>2</sub>
- Develop guidelines for CO<sub>2</sub> quality monitoring, including specific procedures for different CO<sub>2</sub> applications based on project testing results and estimating method uncertainties.

## **Reporting Requirements**

HSE to provide DESNZ high level summary of outputs/findings from the JIPs following key stages in projects or following key consortium meetings – at least once a year. In event that the summary report highlights data that DESNZ consider may be of interest for policy/delivery and/or another regulator, HSE will agree approach with consortium to share additional details.

## **Annex B: The Authority's commitments**

Not Applicable

### Annex C. Costs

DESNZ to fund up to £245,458 to facilitate HSE's participation in four projects. Funding is payable by 31<sup>st</sup> March 2025. However, the funding is not project specific and should one project not proceed then HSE are free to use that funding for other CCUS projects that arise following approval from DESNZ.

		FY24-25
1	DNV: Materials in CCS wells	\$75,000 (£59,190)
2	SINTEF: offshore subsea CO2 releases	1 million Norwegian Kronor (£72,500)
3	TWI: MASCO2T-11	£90,000
4	DNV: Mastering CO2 composition	€28,750 (£23,768)
	TOTAL	<b>£245,458</b>