

Project Name	OFFSHORE WIND & CCS COLOCATION FORUM 8th PLENARY MEETING
Meeting Venue	12 Charles II Street, London, SW1Y 4QU Virtual option held via Teams
Date & Time of Meeting	10:00am – 12:00pm on Wednesday 11 th October 2023

Chair of the Meeting	Adrian Topham (The Crown Estate)	
Names of the Attendees	<ul style="list-style-type: none"> • Amy Bloomfield Clarke, TCE • Abby Haines, TCE • Chris Gent, TCE • James Musgrave, TCE • Nia Hunjan, DESNZ • Jack Collinge, DESNZ • Paddy Dowey, DESNZ • Rubel Ahmed, DESNZ • Wael Khatib, DESNZ • Ajai Ahluwalia, RUK • Prof. John Underhill, UoA • Beth Hebditch, CCSA 	<ul style="list-style-type: none"> • Elle Lashko, Storegga • Iain Wilson, DEFRA • Ian Barron, NSTA • Jo Bagguley, NSTA • Ronnie Parr, NSTA • Viana Iancu, NSTA • Alana Finlayson, NSTA • Lorna Bennet, OREC • Scott Ross, CES • Sarah Knight, CES • Georgie Sutton, MMO • Ross McWilliams, Grayling • Natasha Hall, Grayling

Item	Notes
1.0	<p>UPDATE TO ACTIONS FROM PREVIOUS PLENARY</p> <p>Action 1) Review of deliverables and real-world impact of each workstream conducted.</p> <ul style="list-style-type: none"> • Closed – Document outlining deliverables and real-world impact shared as pre-reading with Forum members and threaded through Plenary #8 presentation. <p>Action 2) Project Colocate signed off for launch and advisory board established.</p> <ul style="list-style-type: none"> • Closed – Project Colocate signed off for launch. <p>Action 3) Project Anemone signed off for launch and advisory board established.</p> <ul style="list-style-type: none"> • For discussion – Project Anemone going through final approvals for launch. <p>Action 4) MMV Seismic report to be published in September 2023</p> <ul style="list-style-type: none"> • Closed – Report published in October 2023. <p>Action 5) Creation of master timeline explored, and solution provided</p> <ul style="list-style-type: none"> • For discussion – TCE has been assessing the potential for a master timeline internally, with a fuller update expected for the next plenary meeting. <p>Action 6) Colocation Forum logo created.</p> <ul style="list-style-type: none"> • Closed – Forum logo created, to be used on all Forum outputs and Forum website. <p>Action 7) Organise future stakeholder engagement events.</p> <ul style="list-style-type: none"> • For discussion – future events being discussed between TCE and Secretariat, with further details to follow.
	<p>AGENDA (see Plenary Meeting Presentation)</p> <ol style="list-style-type: none"> 1. Matters Arising – review actions and minutes from last meeting – 5mins 2. Spatial characterisation Report – Recap 3. Project Colocate – presentation by Aberdeen University 4. MMV Seismic – presentation by NSTA 5. Wind activities and co-location – presentation by CES 6. Project Anemone update 7. Next steps – Test & Demonstration 8. T&S taskforce – update from T&S Taskforce MMV subgroup 9. Meeting Dates & AOB

<p>2.0</p>	<p>Spatial characterisation Report</p> <p>The Chair reminded Forum members that the report was published on the Forum website, and that since the initial work was done, twenty-one additional licenses had been rewarded, on top of the four Track 1 and Track 2 licenses with four overlaps identified in total. The Chair directed members to the map on the TCE website which shows where all the CCS licenses and planned wind farms are located.</p> <p>The Chair confirmed that the NSTA have included clauses in their licenses that they must obtain the approval of the wind farms if they are already there. CCS and OW developers have been provided with their equivalents' details, so that collaboration can be improved.</p> <p>The Chair clarified that whilst there is an understanding of broad timelines and targets for CCS, a timeline that outlines both OW and CCS licenses and timelines is still being discussed internally. Member clarified that individual OW developers are best placed to share project timescales.</p>
<p>3.0</p>	<p>Project Colocate</p> <p>UoA began by introducing the work the University was doing around exploring OW / CCS colocation. UoA pointed TO the known natural gas fields around the UK, and that the team wanted to do a characterisation of all of the sites. UoA outlined how the team evaluated and ranked areas using a variety of technologies and pointed out the challenges to finding solutions.</p> <p>UoA highlighted that it is seeking the best solution to avoid conflict between OW and CCS, answer the question of whether colocation is possible and carry out MMV monitoring for OW and CCS in the same place. UoA pointed out that there remains a question over which MMV tools and techniques can be deployed at different levels.</p> <p>The Chair outlined the governance of Project Colocate, including the roles and responsibilities of organisations. The Chair pointed out that Project Colocate would bring knowledge and learnings from the NSTA MMV Seismic report into its work. The Secretariat recapped the four core deliverables for Project Colocate.</p>
<p>4.0</p>	<p>MMV Seismic</p> <p>NSTA discussed the key deliverables and findings of the MMV Seismic report, including the key areas NSTA monitored. NSTA pointed out that that ocean bottom nodes (OBN) can only provide a limited partial solution to the challenge of colocation. NSTA outlined that optimal partial colocation can be carried out through the use of both streamer technology and OBNs. NSTA confirmed that the report had been published and encouraged Forum members to read the report.</p> <p>The Secretariat discussed the real-world impact of the MMV Seismic report and next steps, including:</p> <ul style="list-style-type: none"> • The validation of other technology for monitoring CO2 movement in stores by Transport & Storage taskforce. • Project Colocate to incorporate key learnings of the Report into its work. • Investigate whether changes to existing OW turbine layouts might enable towed streamer monitoring to improve viability of future colocation projects. • The “no go” areas that apply to OW should also apply to CCS <p>NSTA confirmed that the “no go” areas referenced are for OW, not all marine activity.</p>
<p>5.0</p>	<p>Wind activities and colocation</p>

	<p>CES outlined the state of Scotland's offshore wind market including the number of offshore wind projects in Scotland, the operational wind projects in Scotland, the ScotWind projects and background on the INTOG plan.</p> <p>CES also outlined the sectoral marine plans, and how CES aligns its leasing in Scotland.</p> <p>The Chair noted that it was useful to see the example from ScotWind and INTOG showing how OW can impact on CCS, instead of the other way around, which is a more typical topic of conversation in the Forum.</p>
<p>6.0</p>	<p>Project Anemone Update</p> <p>The Chair explained the key deliverables of Project Anemone delivered by NECCUS and reminded members that the project will look at the practical implications of colocation.</p> <p>The Chair explained that Project Anemone would establish guidance of 'best practice' when colocation comes about and the risks and mitigations of simultaneous operations.</p> <p>The Chair outlined the next steps for Project Anemone, including finalising the agreement with NECCUS.</p> <p>The Chair outlined the key advisory group for Project Anemone which will be responsible for driving the project forward.</p> <p>The Secretariat reiterated that Project Colocate will establish the geological and geographical opportunities for a test and demonstration project to take place, whilst Project Anemone will establish the best practice guidance for how the two technologies involved in test and demonstration will work in operation.</p>
<p>7.0</p>	<p>Next steps</p> <p>Following the completion of Project Colocate and Project Anemone, the ambition is to launch test & demonstration (T&D) projects that demonstrate co-location in practice with monitoring in place.</p>
<p>8.0</p>	<p>Update from T&S Taskforce MMV subgroup</p> <p>A member of the Taskforce outlined the participants in the Subgroup and the Subgroup's objective of an improved understanding of available technologies for the purpose of Track 1 and Track 2 stores. Storegga outlined the workflow of the subgroup.</p> <p>CES emphasised the benefits of bringing automation into MMV work, and the benefits of the Subgroup's work.</p> <p>The question of whether an opportunity exists for peer review of the MMV Subgroup's report was raised.</p>
<p>9.0</p>	<p>MEETING DATES & AOB</p> <p>Secretariat proposed next plenary for Wednesday 6th December.</p> <p>The Chair proposed a stakeholder event around monitoring, guided by UoA and NSTA to help develop Forum members' and broader industry's understanding of monitoring.</p>

	<p>What are some of the technical innovations in the 'race for scale' for wind turbines and what does it mean for spacing, for both fixed bottom and floating wind technology?</p> <p>The Secretariat reminded Forum members that TCE and the Secretariat were open to further events to convene stakeholders in the industry.</p> <p>Does the OW industry need to start considering the cost of additional surveys to investigate the potential of colocation?</p> <p>The Chair reminded that NSTA was doing a structural seismic survey on CCS stores. The UoA said that the recent lack of bids for OW developments has given the CCS industry additional time to survey before the OW developments are established.</p>
	<p>ACTIONS FROM PLENARY #8</p> <p>2.1 TCE to share names of the developers that are impacted by spatial characterisation report.</p> <p>2.2 TCE to share further information on OW / CCS 'master timeline' with the broader Forum.</p> <p>3.1 Secretariat to share contact details of Prof. John Underhill (UoA) for further questions about the project following the session.</p> <p>4.1 TCE to publish link to MMV Seismic report on Forum website.</p> <p>6.1 Future plenary meetings to spread out material and presentations to allow for more group discussion and understanding.</p> <p>8.1 Secretariat to share MMV Subgroup Report with Forum members, when available.</p> <p>8.2 Storegga to liaise with MMV Subgroup members of the possibility of a peer review or advisory group.</p> <p>9.1 TCE and Secretariat to develop event plan on MMV monitoring.</p> <p>9.2 Further information on new technical innovations in the OW industry ahead of the next plenary meeting.</p>
	<p>USEFUL DOCUMENT LINKS</p> <p>NSTA MMV Seismic Report: https://www.nstauthority.co.uk/news-publications/seismic-imaging-within-the-ukcs-energy-transition-environment</p> <p>OW & CCS Colocation Forum plenary meeting documents and publications: https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/energy/offshore-wind-and-s-co-location/</p>