

Jeremy Lockett answers all the questions you asked in our CCUS webinar.

**Is it accurate that only 5 sites are using subsurface storage?**

*There are only 5 sites which are purely storage project sites with no associated carbon capture. These will be sites piloting subsurface injectivity using CO<sub>2</sub> purchased commercially.*

**Does the costs of the plant include the pipeline?**

*On the specific examples shown in the webinar, yes.*

**Previously wind energy required subsidies to work. Why is it that CCUS remains uncommercial & what needs to change to go from pilot projects to commercial business?**

*CCUS is only really 'commercial' when there is a market for the CO<sub>2</sub> as in North American EOR. To make wider CCUS commercial is going to require subsidy like the US 45Q tax credit or perhaps wider CO<sub>2</sub> taxation. It seems most governments are working on ideas as some scheme seems necessary to meet carbon reduction targets.*

**Are these projects generally pumping away the CO<sub>2</sub> downhole in the dense phase?**

*Mostly the CO<sub>2</sub> is supercritical but not uniquely so. CO<sub>2</sub> injection for EOR in the US seems to be done under a wide range of P/T conditions.*

**Are there any projects aimed specifically at enhanced gas recovery out there? - similar to 2007 K12-B field injection.**

*We're not aware of any operational EGR projects. There have been a few small projects in the past which have now shut down. It seems the economic returns for pure EGR are unattractive.*

**Does the database cover things like direct air capture?**

*Yes, direct air capture is included in TROVE CCUS.*

**As we move to hubs & clusters for gathering CO<sub>2</sub> from multiple sources, how do you envisage CO<sub>2</sub> quality being managed keeping in mind that impurities can lead to flow assurance issues downhole?**

*A good question and one I'm not really qualified to respond on. It does seem that the US EOR operators are fairly relaxed about the issue and treat it as part of their normal business. We need to tap into the US experience on that.*

**Does the predicted 1/3rd cost reduction for future projects equivalent to Quest apply to CapEx or OpEx or both?**

*A recent Shell presentation suggested both.*

**How about source of CO<sub>2</sub> for capturing? Are these sources available in the UK?**

*Projects suggested for the UK include capturing CO<sub>2</sub> for various sources in industrial areas such as Teeside, Humberside amongst others. The general concept seems to involve a pipeline gathering in the CO<sub>2</sub> from various industrial sites, such as power plants, petrochemical plants etc. and piping it offshore for subsurface storage. An alternative to building a CO<sub>2</sub> pipeline system is to build a hydrogen plant, capturing the CO<sub>2</sub> at the source and then pipelining offshore for storage. The local industry could then run off a 'blue' hydrogen gas grid.*

Contact [info@troverenewables.com](mailto:info@troverenewables.com) if you have any other questions