

Quarterly Update

Storegga Update: July - October 2020



Storegga Geotechnologies Ltd

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06.11.20 London: Storegga, an independent, low carbon technology business building a portfolio of carbon capture and storage ('CCS'), hydrogen and sub-surface renewable projects is pleased to provide a quarterly update.



- Storegga completed its acquisition of [Pale Blue Dot Energy](#), which alongside Macquarie Group's cornerstone investment, creates a new, independent low carbon technology business.



- The Acorn CCS and Hydrogen project (100% owned and operated by Pale Blue Dot Energy) is on track to be storing CO₂ in 2024. Acorn is expected to scale up within the first decade of operations to target in the region of 20 million tonnes of CO₂ storage per year.



- Detailed (FEED) engineering is commencing on Acorn CCS. FEED is expected to conclude in 2021, enabling a formal project sanction (FID) in 2022.



- Notification received from the European Commission that the CO₂ transport and infrastructure elements of the Acorn CCS project have been included on the list of projects to receive [Connecting Europe Facility](#) funding. This recognises the significant ability for Acorn to support both UK and EU Net Zero ambitions.



- Acorn has recently partnered with a wide group of industrial partners (including SSE Thermal, National Grid and GBTron Power Ltd) to apply for the UK Government's [Industrial Strategy Challenge Fund](#) (ISCF) support to progress the project's buildout plans.



- Negotiations are well advanced to form an Acorn joint development company to deliver the initial phase of the project. Pale Blue Dot will remain as lead developer and will be a material equity holder in this company. This will establish the governance and development team for delivering Acorn.



- A Memorandum of Understanding ('MOU') was signed between Petrofac and Storegga to collaborate on business development and project initiatives in CCS, hydrogen and other low carbon projects with an initial focus on the UK Continental Shelf and North West Europe.



- Pale Blue Dot has agreed to collaborate with [Carbon Engineering](#), a leading provider of Direct Air Capture (DAC) technology to deploy commercial DAC projects in the UK.

Nick Cooper

Chief Executive Officer

The quarter for Storegga started strongly. In July, the simultaneous acquisition of low carbon project developer [Pale Blue Dot Energy](#) and an investment from [Macquarie Group](#) created a new, independent, low carbon technology business.

Pale Blue Dot's [Acorn Project](#) is set to become the first and most scalable UK carbon capture and storage (CCS) project, while its sister hydrogen project also offers a renaissance in the UK energy sector.

Acorn CCS is expected to be operational from 2024 and could scale to up to 20 million tonnes per year of CO₂ storage within a decade of operations.



The Acorn Project facilitates a value chain of inter-related businesses: from the 'downstream' geological carbon storage, through the 'midstream' pipeline and marine transport, to the 'upstream' activities of industrial and power carbon capture, direct air capture and hydrogen.

As the need for low carbon energy moves rapidly up the [wider political agenda](#) and politicians look to a green recovery post COVID-19, the Acorn Project and the activities within its value chain, are well placed to capitalise on the emerging regulatory environment and potential future Government support.



Strategic partnerships & recognition

Both Storegga and Pale Blue Dot have been establishing strategic partnerships in the past few months; bolstering organisational capabilities and enabling exciting low carbon development opportunities.

In August, Storegga and international service provider [Petrofac](#) signed a [Memorandum of Understanding](#) so that we can use Petrofac's engineering and project delivery capabilities and also collaborate on potential business development and project initiatives in [CCS](#), [Hydrogen and other low carbon projects](#).

In September, Pale Blue Dot [announced a partnership](#) with [Carbon Engineering](#), a leading provider of Direct Air Capture (DAC) technology to deploy commercial DAC projects. Pale Blue Dot now holds the exclusive rights to develop the Bill Gates-backed technology in the UK.

Pale Blue Dot's persistence in promoting the energy transition to a decarbonised society were recognised at the UK Offshore Achievement Awards in August. The team received the **'Energy Transition for Future Generations'** [award](#).

In October, [Forbes magazine reported](#), 'Organizations like Pale Blue Dot Energy represent the key to our civilization's continued thriving. Intelligent investors take note.'



The Acorn Project

The Pale Blue Dot project team is advancing the multiple workstreams associated with the UK's most advanced CCS project. The project is on track to be storing CO₂ from 2024 and to support a rapid scale-up of capacity to meet a forecast demand of at least 20 million tonnes of CO₂ each year within a decade of first operations. The project will first store up to five million tonnes per annum via the repurposed Goldeneye pipeline, and then expects to adapt two other existing pipelines to reach 20 million tonnes each year. Further expansion beyond this can follow with the laying of new pipelines. At an initial five million tonnes, Acorn can be delivering at least half of the UK Committee on Climate Change's recommendation for at least 10 million tonnes of CO₂ storage each year by 2030.



The project design concept has been selected for Acorn CCS and an initial round of public consultation has been held in the form of a [‘virtual townhall’](#) to comply with COVID-19 restrictions.

With detailed engineering underway, Acorn CCS is targeting project sanction by early 2022, subject to the fiscal arrangements being confirmed by the UK Government. Heads of terms on the fiscal regime for carbon storage is expected by December 2020.

Bringing operational CCS and hydrogen projects online in the mid 2020’s is a critical objective for Storegga and for the UK’s Net Zero ambitions.

Acorn has geographical and geological advantages that could enable it to become potentially the largest European CCS project in the coming years. The brownfield repurposing of a terminal, a deep-water port, and first one, then three existing offshore pipelines enable over 30% of the UK’s storage resource to be reached in a rapid, cost effective, phased development. This brownfield redevelopment at Acorn is forecast to deliver a significantly lower cost development (in both absolute and unit cost terms) and earlier

economies of scale than are forecast for new-build, greenfield CCS projects. We currently estimate long run transport and storage costs of £15-25/T will be achievable once the project is storing five million tonnes or more of CO₂ each year. At this cost level, this makes the economics of CCS attractive for a broad range of industrial emitters against their ‘do nothing’ costs in the outlook for UK and European carbon prices.

To date, there have been significant expressions of interest from both UK and European CO₂ emitters to access and utilise the Acorn CCS infrastructure. Interest from emitters is rapidly increasing as their Net Zero requirements and ambitions are firming up. Over 20 million tonnes a year of potential CO₂ supply has been identified from these initial expressions of interest alone.

The UK’s CCS projects create an excellent opportunity for the country to develop the expertise and a global leadership role in building, operating and maintaining CCS and hydrogen infrastructure. The projects are a major element in achieving the UK’s 2030 and 2050 climate change objectives. Excellent offshore geology, skilled workforces, and the ability to adopt new technologies in the form of CCS and hydrogen, combine to underpin the UK’s ambition to be a world leader in clean energy.

Funding and governance

We continue to coordinate the various funding streams available to support deployment of the different components of the Acorn Project.

In September, we received notification from the European Commission that the CO₂ transport and infrastructure elements of the Acorn CCS project have been included on the list of projects to receive [Connecting Europe Facility](#) funding. Acorn is the only CCS project in the UK recognised as a [European Project of Common Interest](#) and joins five other CO₂ transportation infrastructure initiatives across Europe that are receiving support to establish a Europe-wide CO₂ network.

In parallel, we have also recently partnered with a wide range of high profile industrial partners to apply for the UK Government [Industrial Strategy Challenge Fund](#) (ISCF) support to progress the project buildout plans. We will provide further information on these partnerships and on the status of these applications in early 2021.

Steps are well advanced to formalise the governance of the Acorn Project with our industry partners as we transition into project delivery.

Investor briefings

In September and October, Storegga began a series of investor briefings with sessions hosted by Credit Suisse and Citibank. Further briefings are planned with Goldman Sachs and Tudor Pickering Holt in November.

The response from institutional investors has been overwhelmingly positive. [Please get in touch](#) if you want to know more.



And finally...

These are strange times, but this is the moment, the climate emergency is incontrovertible. COVID19 has shaken society, now is a rare opportunity to reset with a better agenda.

The UK has an extraordinary natural asset in offshore storage that can be used both in the fight to mitigate climate change and to create UK jobs at this crucial time. CCS is not the only tool needed to help tackle climate change, but it is a critical one to help sustain our existing industries and support new ones.

Storegga promises that every pound of investment will be carefully used to deliver world-scale Net Zero infrastructure that we can be proud of now and that future generations will be grateful for. We commit to a singular focus on rapidly delivering these projects at scale to maximise their positive climate impact and their societal benefit.

Government and Investor support for Acorn and other CCS projects now will give us a real tool for change.

Nick Cooper
CEO, Storegga Geotechnologies Ltd.

