

# DIRECT AIR CAPTURE FAST FACTS

## REMOVING CO<sub>2</sub> FROM THE ATMOSPHERE

According to the Intergovernmental Panel on Climate Change, carbon removal technologies will be critical in helping limit global warming to 1.5°C by 2050. Oxy formed 1PointFive, a carbon capture, utilization and storage (CCUS) development company, to build and deploy Direct Air Capture (DAC) facilities, which will remove carbon dioxide (CO<sub>2</sub>) from the atmosphere and commercialize Carbon Engineering's carbon removal technology. This effort is expected to support global decarbonization and create a pathway to achieve net-zero climate targets for Oxy and others.



#### **Direct Air Capture**

Direct Air Capture (DAC) is a process that captures  $\mathrm{CO}_2$  from the atmosphere using an engineered technology. When operational, we expect DAC facilities will be powered by zero-emission energy and use fans to pull large volumes of air into an air contactor system. The  $\mathrm{CO}_2$  is separated from the air, concentrated and compressed through a series of chemical processes that result in a high-purity  $\mathrm{CO}_2$  stream which can then be safely and securely stored deep underground in geologic formations or used in a variety of processes to create new products such as fuels, cement or plastics.

#### **Mission-Critical Capability**

Limiting global temperature rise to 1.5°C by 2050 could require up to 20,000 million tonnes per annum (MTPA) of carbon removal. Today, we believe DAC can economically address approximately 5,000 MTPA from hard-to-decarbonize industries such as aviation, shipping, trucking and rail. With increased scale and the associated cost reduction, we expect DAC carbon removal will be able to competitively address approximately 15,000 MTPA of CO<sub>2</sub> emissions.

#### Rapid, Large-Volume Removal

A key benefit of DAC is that it can support large volumes of  $\mathrm{CO}_2$  removal from the atmosphere with a relatively small footprint very quickly. By rapidly developing DAC technology, we are preparing the infrastructure to help our world reach and sustain net-zero emissions. Developing this infrastructure now enables us to begin necessary large-volume  $\mathrm{CO}_2$  capture to bring costs down and ensure a long-term economic solution for reaching and sustaining net-zero emissions.

#### **High Integrity, Secure Storage**

 $\mathrm{CO}_2$  removed from the atmosphere with DAC will be securely stored via geologic sequestration. Geologic sequestration is recognized as one of the most durable ways to store  $\mathrm{CO}_2$  and allows for measurement, verification and reporting of  $\mathrm{CO}_2$  volumes, which will be verified under third-party standards. Oxy has over 50 years of experience in  $\mathrm{CO}_2$  processing and injection and is bringing this experience and know-how to these new carbon removal and storage projects.

#### **Economic Advantage**

Direct Air Capture represents an economic growth opportunity through large-scale infrastructure projects, boosting industries for key construction materials and creating jobs both in supply chain industries and during the construction and ongoing operation of DAC facilities. We expect DAC and sequestration hubs to serve as carbon innovation centers that draw additional CO<sub>2</sub> technology and utilization industries and further support host communities.

#### **Decarbonization through Collaboration**

Taking on a challenge this large demands teamwork. Oxy is a key investor in climate solutions company Carbon Engineering, which pioneered, and continues to innovate, groundbreaking DAC and AIR TO FUELS<sup>TM</sup> technology. Oxy and its subsidiary 1PointFive are developing DAC technology with a team of innovative partners like global engineering, procurement and construction (EPC) company Worley.

#### **Progress Toward DAC Deployment**

#### **LICENSE TO BUILD**

1PointFive holds an exclusive DAC license for U.S. deployment and Oxy Low Carbon Ventures has a worldwide agreement with Carbon Engineering as the execution partner for all DAC deployments.

#### **INNOVATION CENTRE**

The Carbon Engineering Innovation Centre was built in 2021 in Squamish, B.C. for ongoing DAC technology development and testing. It enables Carbon Engineering and 1PointFive to continue optimizing DAC technology, so improvements can be introduced to commercial facilities worldwide.

#### STRATOS CONSTRUCTION UNDERWAY

Construction of Stratos in the Texas Permian Basin began in September 2022. Commissioning and startup of carbon capture is anticipated in late 2024, with commercial operations expected to begin in mid-2025.

### 1POINTFIVE SELECTED FOR U.S. DEPARTMENT OF ENERGY GRANT

In August 2023, 1PointFive was selected to receive a grant from the U.S. Department of Energy's Office of Clean Energy Demonstrations for the development of its South Texas DAC hub. The hub, to be located on the King Ranch in Kleberg County, is expected to include the world's first DAC plant designed to remove up to 1 million metric tons of CO<sub>2</sub> per year.



