

# **ENVIRONMENTAL COUNCIL OF STATES**

**ECOS OIL & GAS CAUCUS ON METHANE MOVES** 

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Director US Onshore Policy & External Affairs



# Oxy's Pathway to Net-Zero

### TOGETHER WE CAN REDUCE CO2 EMISSIONS

Net-zero emissions in our operations and energy use (Scope 1 and 2) before 2040, with an ambition to achieve before 2035; Net-zero for our total emissions inventory including product use (Scope 1, 2 and 3) with an ambition to achieve before 2050; and Total carbon impact through carbon removal and storage technology and development past 2050.

WE'RE BRINGING TOGETHER PEOPLE, RESOURCES, INNOVATIVE TECHNOLOGY AND OUR 50+ YEAR LEGACY OF CARBON MANAGEMENT TO ACCELERATE OUR PATHWAY TO NET ZERO, AS WELL AS HELPING OTHERS DO THE SAME.

VICKI HOLLUB, PRESIDENT AND CEO OCCIDENTAL



### CARBON MANAGEMENT

BY THE NUMBERS

Oxy's global leadership in the safe and secure storage of  $CO_2$  is central to our strategy to achieve Net Zero.

A TOP PRODUCER IN THE PERMIAN BASIN WITH

2.8 million

**CO<sub>2</sub> STORED** 

# Up to 20 million

METRIC TONS STORED ANNUALLY

**EXISTING CO<sub>2</sub> INFRASTRUCTURE** 

13 CO<sub>2</sub>

NET MINERAL ACRES

PROCESSING AND RECYCLING PLANTS 2,500 miles

VERIFICATION

# **Three U.S. EPA-approved**

MONITORING, REPORTING AND VERIFICATION (MRV) PLANS

2015: Denver Unit 2017: Hobbs Field 2021: West Seminole San Andres Unit Δ







# A HISTORY OF INNOVATION AND EXECUTION

OXY FORMED 1POINTFIVE TO DEVELOP AND DEPLOY INTEGRATED CCUS SOLUTIONS.

50+ years carbon management experience

Experts in CO<sub>2</sub> separation, transportation, utilization and storage

Investing across the carbon capture value chain

Developing integrated solutions to address climate change





## FROM CAPTURE TO LOW-CARBON PRODUCTS

### PRACTICAL SOLUTIONS TO HELP MEET CLIMATE OBJECTIVES

### POINT-SOURCE CAPTURE

This solution captures  $CO_2$  before it enters the atmosphere. 1PointFive will engineer carbon capture plants at industrial and manufacturing facilities such as those producing ethanol, steel, cement and biofuels. This  $CO_2$  will be transported from the emitter's location and permanently stored in  $CO_2$  sequestration hubs.

ZERO-EMISSION POWER

#### CO2 TO FUEL SYNTHESIS

1PointFive plans to bolt on fuel synthesis processes to Direct Air Capture facilities and use the captured  $CO_2$  to create low-carbon diesel and jet fuels. This process creates a synthetic fuel with an up to 90 percent emissions reduction factor (ERF) when compared to conventional diesel and jet fuels.

LOW-CARBON DIESEL AND JET FUELS MADE FROM ATMOSPHERIC CO,

### 🛞 DIRECT AIR CAPTURE

Direct Air Capture (DAC) is the process of removing  $CO_2$  directly from the air. DAC is expected to remove large volumes with a relatively small footprint very quickly. To the tune of 1 million tonnes per year, per facility. The  $CO_2$  can then be permanently stored in 1PointFive's geologic sequestration hubs to generate a carbon removal credit, or be purfied and utilized for fuel synthesis or other purposes.

Karbon as a feedstock

The DAC technology 1PointFive utilizes inherently enables a high-purity  $CO_2$  stream without additional high-energy, high-cost processing. This means our DAC  $CO_2$  streams will be ready for use as a feedstock in  $CO_2$ product manufacturing.

### GEOLOGIC SEQUESTRATION

 $CO_2$  sequestration hubs will be dedicated to underground  $CO_2$  storage in saline formations. The sequestration process is supported by leading experts with decades of reservoir engineering experience. U.S. EPA-approved monitoring, reporting and verification plans will be in place to oversee the carbon accounting and the ongoing safety of the CO<sub>2</sub> storage.

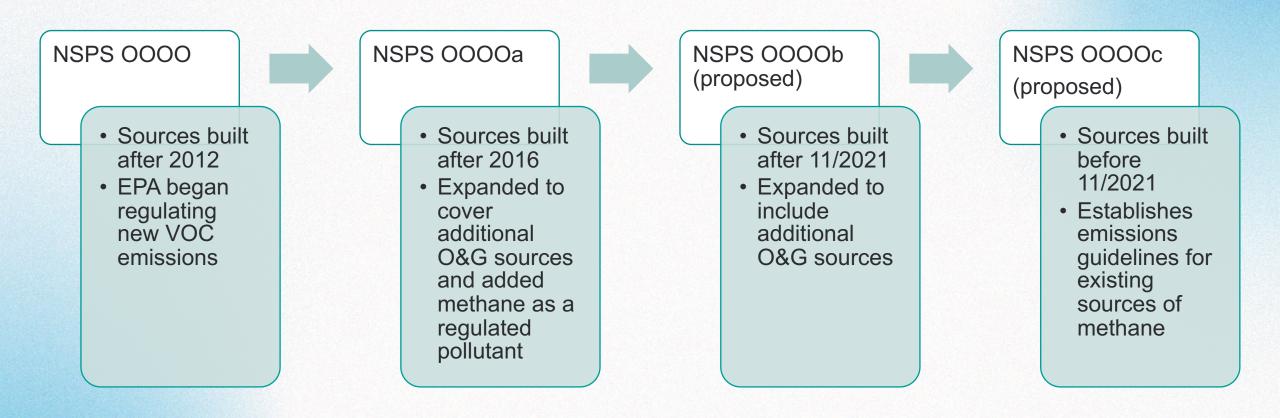
### PERSPECTIVES ON METHANE MITIGATION AND REGULATION

We recognize the scientific consensus on climate change and the need to lower both GHG emissions and atmospheric concentrations of CO<sub>2</sub>. We also recognize the importance of impactful public policy to achieve the climate goals set forth by the Paris Agreement.

- Oxy supported restoring federal methane regulations under the Congressional Review Act
- In 2014, Oxy supported the Colorado methane rules, which was a first in the nation and in 2021 Oxy supported the CO GHG Intensity Rule
- In 2021, Oxy was recognized for working in partnership with community and environmental groups to endorse the New Mexico Environment Department (NMED) efforts to reduce emissions through more stringent regulations

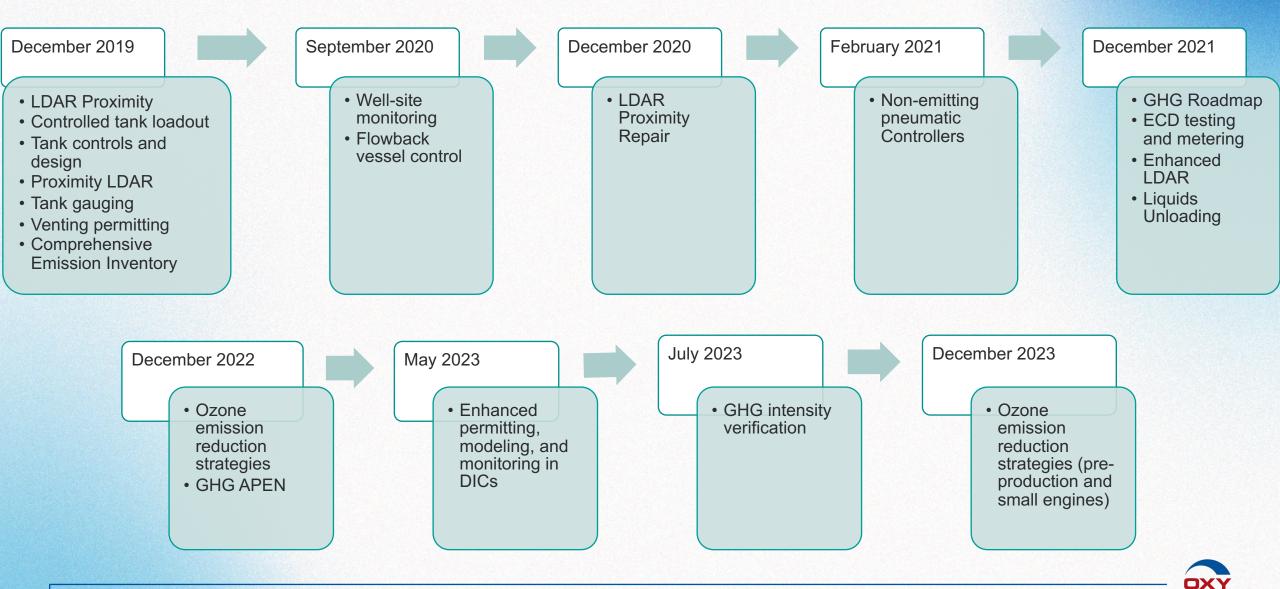


## FEDERAL AIR REGULATORY PROGRAM TIMELINE





# **COLORADO AIR REGULATORY PROGRAM TIMELINE**



# **OXY COLORADO OPERATIONS**

### TANKLESS OPERATIONS

Oxy's innovative surface design in the DJ Basin uses pipelines instead of trucks to transport oil to a central processing facility, eliminating the need for oil storage tanks near wells. This technology decreases our environmental footprint and reduces emissions, dust, noise and truck traffic.

### CONSERVING WATER AND REDUCING IMPACTS

Our "Water-On-Demand" system delivers water for hydraulic fracturing to well sites in the DJ Basin through a pipeline system, which reduces truck traffic, impact to roads, noise and emissions. In many cases, this water is recycled.

#### **REAL-TIME MONITORING**

Our 24-hour Integrated Operations Center provides realtime monitoring and remote operation capabilities for many of our DJ Basin wells, water tanks and gathering systems.

### WHAT IS OXY DOING TO REDUCE EMISSIONS? PROGRAMS





#### OIL AND GAS CLIMATE INITIATIVE

Commit to reducing the methane and CO<sub>2</sub> intensity of our operations



Replace high bleed pneumatics by 2023

## **Oil & Gas Methane Partnership 2.0**

Comprehensive, measurement-based reporting framework that improves the accuracy and transparency of methane emissions reporting



### WHAT IS OXY DOING TO REDUCE EMISSIONS - OPERATIONS

- Ground based methane sensor deployment
- Emissions Technology Team
- Infrared OGI Cameras
- Unmanned Aerial Vehicles (UAV)
- Reduced Emissions Completions (RECs)
- Install Vapor Recovery or Vapor Combustion Units
- Tankless facility designs



# **2022 OXY EMISSIONS REDUCTION PROGRESS**

- Achieved Zero Routine Flaring (ZRF) in the Permian Basin operations in 2022, and our Rockies and Gulf of Mexico
  operations have sustained ZRF since 2020.
- As Oxy continues to progress toward elimination of routine flaring company-wide, we are also pursuing reduction of nonroutine flaring.
  - Approval of closed-loop gas capture technology in New Mexico to eliminate flaring during plant and pipeline outages or other temporary operational conditions.
- Retrofitted or eliminated over 95% of high-bleed pneumatic controllers in our U.S. operations since 2020, and awaiting delivery of equipment to address the remaining devices in 2023
- Expanded the inspection, repair and maintenance programs, including using fixed monitors and aerial and satellite surveillance.



## **COMMUNITY ENGAGEMENT**

Engagement in Action:

- Activating our employees on detrimental legislation, rulemakings, and ballot initiatives
- Strategic partnerships that invest in our area of operation and provide an avenue for advocacy
- Development and execution of comprehensive Community Benefits Plans for our Low Carbon Ventures projects
  - Assisting communities with Wi-Fi service, building STEM into public school earlystage curriculums, studying solutions for improving transportation
- Humanizing our Industry: Informing, Empowering & Activating







