

Testimony of Richard Jackson  
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Committee on Energy and Natural Resources  
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Chairman Murkowski, Ranking Member Manchin, and Members and staff of the Senate Environment and Natural Resources Committee, thank you for the opportunity to testify. I'd also like to thank you for your leadership on carbon capture and the EFFECT Act - a piece of legislation that Occidental is proud to support.

My name is Richard Jackson, and I work as President of Occidental's newly formed subsidiary, Low Carbon Ventures. Occidental is one of the largest independent oil and gas companies in the United States, by market capitalization, and is headquartered in Houston, TX. Our domestic operations are in the Permian Basin of West Texas and Southeast New Mexico, and our core international operations are in Oman, UAE and Colombia. In 2018, we produced more than 650,000 barrels of oil equivalent per day, with a global workforce of nearly 38,000 employees and contractors.

Low Carbon Ventures was formed in 2018 to enhance our business and reduce atmospheric greenhouse gas. We are proving that we can decrease CO<sub>2</sub> emissions while making smart business decisions. In fact, Occidental management is exploring an aspiration of becoming carbon neutral, accounting for not only our operational emissions but also for the emissions related to the use of our products. We seek to do this while continuing to grow our business. The significant driver will be carbon capture and use, with the near-term ability to produce a carbon neutral barrel of oil. The technology we use will also helping create many other commercial low carbon products and business opportunities in the future.

We appreciate that there are many different low carbon strategies for an energy company. Occidental truly is an all of the above energy company. We purchase natural gas and coal-fired power for electricity. We partner with ethanol producers. Some of our chemical facilities have cogeneration technology that allow us to burn the hydrogen byproduct from our chemical operations to make zero-carbon power. And we are expanding our use of solar power. We are currently installing a 16MW solar facility at an oilfield in Odessa, Texas, which will reduce our emissions and help us with energy efficiency. In Oman, we are partnering with GlassPoint to build one of the world's largest solar arrays to generate steam that will be used to produce oil with a lower carbon intensity.

At Occidental, we are in a unique position as the world's largest consumer of CO<sub>2</sub>, which we used to support a successful, mature business with tremendous growth potential. For context, we inject over 2.6 billion cubic feet of CO<sub>2</sub> every day or— 50 MMT per year. Of that 50 MMT,

about 18 MMT is permanently sequestered, while the balance is safely recycled for reinjection until permanently stored underground. Each year, we sequester the carbon equivalent of the emissions from 4 million passenger vehicles. Utilizing more man-made CO<sub>2</sub> will allow us to grow this business while sequestering significantly more CO<sub>2</sub>.

We have been injecting, transporting, and separating CO<sub>2</sub> for use in enhanced oil recovery (EOR) for over 40 years. Using EOR, we are able to get 10%-25% more oil out of our reservoirs – oil that otherwise would not be recovered. And because we operate closed-loop systems, virtually all of the CO<sub>2</sub> we inject is permanently and safely sequestered in the geology of the reservoir.

As we look forward to meeting a lower carbon energy demand, our capability presents great potential. The oil we can produce using captured, man-made CO<sub>2</sub> has a much lower total carbon footprint than a conventional barrel of oil. In fact, the International Energy Agency recognizes that a barrel of oil produced using man-made CO<sub>2</sub> has a significantly reduced carbon footprint compared to a conventional barrel of oil. At Occidental, we estimate we can reduce this further to enable us to produce a carbon neutral and even carbon negative barrel of oil. In short, we are increasing today's production, tomorrow's reserves, and significantly decreasing our collective carbon impact. We think this is an example of American innovation at its best.

Currently, CO<sub>2</sub> EOR offers the most favorable economic approach to carbon capture. We purchase the CO<sub>2</sub> as a process feedstock much like a farmer uses fertilizer to increase his crop yield. However, we believe the future will hold many other commercial uses for CO<sub>2</sub> – everything from making synthetic low-carbon fuels to low carbon materials like cement and plastics. EOR can pave the way in the near term not only for carbon capture, but also for critical CO<sub>2</sub> pipeline infrastructure that can drive innovation and commercialization of these products. Occidental is investing in and partnering with research organizations and start-ups to advance these innovative uses for CO<sub>2</sub>. They are setting a foundation for a new economy based on utilizing CO<sub>2</sub> instead of emitting it. We believe these business-driven solutions will have a meaningful and profound impact on reducing CO<sub>2</sub> emissions not only in the United States but across the globe.

While we believe that carbon capture, utilization and sequestration is a critical technology to meet many of our nation's priorities, we also believe that it should complement other critical low carbon solutions. Occidental is focused in three key areas for emissions reductions: reducing the emissions from our own operational activities, energy efficiency and carbon capture and use – both from industrial sources and directly from the air. We have found significant value in working with non-traditional allies to advance these goals.

Last year, Occidental announced a feasibility study with White Energy, a biofuels producer in Texas and Kansas. This study would outline options for capturing CO<sub>2</sub> from White Energy's ethanol facilities in the panhandle of Texas and transport that anthropogenic (manmade) CO<sub>2</sub> to the Permian Basin for EOR. The project could potentially sequester approximately 1 million

tons of CO<sub>2</sub> per year. Our partnership is an important first step in cross-industry collaboration to make carbon capture economic, practicable and scalable.

In November, Occidental joined Exelon, McDermitt, and 8Rivers to partner with NETPower, a zero emissions natural gas power generation facility. NETPower's power generation technology with built-in carbon capture complements Occidental's leadership in CO<sub>2</sub> utilization and sequestration, making us ideal partners to tackle carbon emissions worldwide.

Most recently, Occidental announced an investment in British Columbia-based Carbon Engineering, which is a company invested in Direct Air Capture. This technology pulls CO<sub>2</sub> directly from the atmosphere, and uses a chemical process to separate the CO<sub>2</sub> from other gases. That CO<sub>2</sub> can then be used for any number of purposes, including but not limited to, EOR. The direct air capture plants are location independent and can be co-located with the commercial use business, eliminating the need for additional transportation or pipeline costs.

Many of these partnerships would not have been possible without the work of the Senate to expand and extend the 45Q tax credit in 2018. 45Q makes the investment in carbon capture possible, enabling more efficient and economic technology. Occidental sees the opportunity here to reach more industrial facilities and capture more CO<sub>2</sub> for EOR now and feedstock for plastics, cement fuels and other products in the future.

Occidental is also involved in key carbon reduction coalitions and believes this to be critical. Two I will highlight are the Oil and Gas Climate Initiative and the Carbon Capture Coalition. OGCI, is comprised of 13 international oil and gas companies that represent 25% of the world's production, who have come together with a joint investment of more than \$1 billion to be used over the next 10 years to advance low-carbon solutions for the energy, industrial and transportation value chains. The Carbon Capture Coalition is an impressive organization with over 60 members. Representatives from labor, environmental NGOs, oil and gas, coal and others meet regularly to discuss ways in which we can advance the deployment of carbon capture. The breadth of this group demonstrates that carbon capture is a solution supported by many as a proven technology to reduce CO<sub>2</sub> emissions. As our CEO, Vicki Hollub, has said many times, partnerships with a variety of stakeholders, regulators and legislators is the most efficient and perhaps the only pathway to solving climate change risk. We are proud of these relationships and welcome the opportunity to work with these and other stakeholders.

At Occidental, we continue to seek ways to decrease emissions and invest in low-carbon energy sources. However, we do believe there's a role for Congressional leadership when it comes to carbon capture, utilization and sequestration. Specifically, we see a need to advance commercialization through a large scale CO<sub>2</sub> transportation networks now. Regional and then national, large-scale CO<sub>2</sub> pipeline networks would act as the foundation for the CO<sub>2</sub> economy, moving CO<sub>2</sub> from emissions sources to commercial uses. Your leadership has created the 45Q

tax incentive to help make the capture technology economic and widespread. We look forward to working with you on solutions to incentivize the buildout a robust national CO<sub>2</sub> transport network to move this CO<sub>2</sub> to utilization or safe, permanent geologic storage.

Looking forward, we at Occidental are exploring three bold challenges:

- 1.) Growing our oil and gas production and reserves in an economic and low-cost manner.
- 2.) Making significant progress toward achieving ‘carbon neutrality’ for all of Occidental Petroleum, inclusive of the emissions generated from the use of Oxy products.
- 3.) Operating in a safe manner that respects the environment and our neighbors.

Again, we are focused on meeting a lower carbon energy and product demand. Today, we have a tremendous commercial appetite for CO<sub>2</sub> for use in EOR. But we see EOR and CCUS as a platform for tomorrow, enabling innovation for new and sustainable business models. We have spent the past few years working with employees, shareholders, investors and the leadership team at Occidental to discuss climate change and solutions. And we believe that CCUS and the innovation spurred by investment in CCUS and EOR represent a significant pathway to the most challenging issues of our time – protecting our climate while advancing our economy and supplying low cost energy solutions.

I would like to end by thanking you for the opportunity to speak to you today about an issue that our CEO, our employees and I am passionate about. I look forward to helping answer any questions that you may have.