



Action Report

Environment (Climate Change)

Occidental Petroleum

April 21, 2017

Ticker	Exchange	Meeting Date	Record Date	Annual Meeting Location
OXY	NYSE	5-12-17	3-14-17	Midland, Texas

Agenda

Item	Proposal
1	MGT: Elect directors
2	MGT: Advisory vote on executive compensation
3	MGT: Advisory vote on frequency of executive compensation vote
4	MGT: Ratify selection of auditors
5	SH: Report on climate change strategy
6	SH: Lower threshold to call special shareholder meetings
7	SH: Report on methane emissions/reduction targets
8	SH: Review/report on political spending

Si2 Briefing [Environment \(Climate Change\)](#) and [Environmental Management](#)

Report Author Sara E. Murphy

Links [2017 Proxy Statement](#), [2016 Form 10-K](#)

Vote History Both proposals are resubmissions this year. Item 5 requesting a report on climate change strategy received 49 percent support last year, while item 7 regarding methane emissions received 32.8 percent support in 2016, 27.9 percent in 2015 and 30.3 percent in 2014.

Item 5: Report on climate change

Resolved Clause RESOLVED: Shareholders request that Occidental Petroleum Corporation (Occidental), with board oversight, produce an assessment of long-term portfolio impacts of plausible scenarios that address climate change, at reasonable cost and omitting proprietary information. The assessment, produced annually with the initial report issued prior to the 2018 Annual Meeting of Stockholders, should explain how capital planning and business strategies incorporate analyses of the short- and long-term financial risks of a lower carbon economy. Specifically, the report should outline the impacts of multiple, fluctuating demand and price scenarios on the company's existing reserves and resource portfolio - including the International Energy Agency's "450 Scenario," which sets out an energy pathway consistent with the internationally recognized goal of limiting the global increase in temperature to 2 degrees Celsius.

Lead Proponent Nathan Cummings Foundation

Summary The proponent would like information on how the company’s business strategy is responding to global actions to address climate change. Such information would include whether the company’s business plan is aligned with limiting global warming and how low-carbon and low-demand scenarios are factored into business planning. The proponent identifies several of Occidental’s peers that are taking actions similar to those requested in this proposal. Occidental Petroleum says it already reports to stockholders on the risks associated with climate change, and that it is guided by the Financial Stability Board’s recommendations. Management points to its recently strengthened board oversight of climate change risks and opportunities, and says it integrates the risks associated with a low-carbon economy into its capital planning process. It notes that Occidental operates on shorter time horizons common to its exploration and production sector, and is well positioned to shift capital allocation as necessary. The board points to the company’s significant investment in carbon capture and storage as evidence of its efforts to constrain greenhouse gas emissions. Management says it already reports thoroughly on these topics, implying that an additional report is unnecessary.

Item 7: Report on methane emissions/reduction targets

Resolved Clause RESOLVED: Shareholders request Occidental Petroleum issue a report (by October 2017, at reasonable cost, omitting proprietary information) reviewing the Company's policies, actions, and plans to measure, disclose, mitigate, and set quantitative reduction targets for methane emissions and flaring resulting from all operations under the company's financial or operational control.

Lead Proponent Arjuna Capital

Summary The proponent is concerned about Occidental Petroleum’s methane emissions from its oil and gas operations and their contribution to climate change and the risks associated with it. The proponent maintains that a strong program of measurement, mitigation, target setting and disclosure would reduce regulatory and legal risks, maximize gas for sale and bolster shareholder value. Occidental Petroleum’s board believes the proposal is unnecessary, saying its existing methane emissions control practices are sufficient. Management also points to regulatory programs under development at various levels, saying these are “likely to achieve the objectives of the request more effectively and uniformly than the stockholder’s proposed ad hoc approach.”

I. Occidental Petroleum & Climate Change

Occidental Petroleum acquires, explores and develops oil and gas properties in the United States and internationally. The company operates in three segments: Oil and Gas, Chemical, and Midstream and Marketing.

Financials			
(\$ millions)	2016	2015	% Change
Net Sales	\$10,090.00	\$12,480.00	-19.2%
Net Income	(\$574.00)	(\$7,829.00)	92.7%

- The Oil and Gas segment explores for, develops and produces oil and condensate, natural gas liquids (NGLs) and natural gas. The company’s domestic oil and gas operations are focused in the Permian Basin of West Texas and southeast New Mexico. Its international oil and gas operations are focused on Oman, Qatar, the United Arab Emirates and Colombia.
- Occidental’s chemical segment (OxyChem) manufactures and markets basic chemicals, including chlorine, caustic soda, chlorinated organics, potassium chemicals, ethylene dichloride, chlorinated isocyanurates, sodium silicates and calcium chloride; vinyls comprising vinyl chloride monomer and polyvinyl chloride; and other chemicals, such as resorcinol.

- OxyChem has announced a \$145 million expansion of its manufacturing plant in Geismar, Louisiana. The project will produce an OxyChem patented new raw material used in making “next-generation, climate-friendly refrigerants with a low global warming and ozone depletion potential.” The company expects to bring the project online in late 2017. In its 2016 response to CDP’s climate change survey, Occidental Petroleum says this project accounts for “less than or equal to 10%” of its research and development in low carbon products for the year.
- The midstream, marketing and other segment gathers, processes, transports, stores, purchases and markets oil, condensate, NGLs, natural gas, carbon dioxide and power. This segment also trades around its assets consisting of transportation and storage capacity, as well as oil, NGLs, gas and other commodities.

Capital spending: In its 2016 Form 10-K, Occidental acknowledges the challenging environment under which it and other oil and gas companies have operated in the last few years, owing to global commodity price declines that management expects may “continue for an extended period. Declines in commodity prices could require Occidental to reduce capital spending and impair the carrying value of assets,” a development that it deems “reasonably possible.” The company says it “remains committed to allocating capital to only its highest return projects. Occidental’s 2017 capital spending is expected to be in the range of \$3.0 billion to \$3.6 billion.” The company’s capital expenditures have declined significantly over the last five years, from a high in 2014 of \$8.9 billion to a low in 2016 of \$2.7 billion.

Climate change risk: In its 2016 Form 10-K, Occidental Petroleum makes almost no mention of climate change, except to acknowledge increasing political and social attention to the issue and to discuss the regulatory uncertainty that currently surrounds it. The only risk Occidental identifies as having the potential to affect its operations is a regulation-induced price increase for hydrocarbons, and a concomitant reduction in demand. The only mentions of greenhouse gases or emissions are confined to the same paragraphs. Methane is not specifically mentioned.

In its 2016 response to CDP’s climate change survey, Occidental Petroleum circumspectly acknowledges some of the many potential physical risks climate change poses. The company notes the damage hurricanes can and have inflicted on its facilities. However, it skirts established climate science when it says, “Oxy is not aware of credible projections that natural disasters, whether or not driven by changes in climate could result in immitigable impacts are probable [sic] within the anticipated operating life of its facilities,” characterizing the likelihood of such an event as “very unlikely” and its magnitude low. Similarly, Occidental acknowledges that changes in precipitation such as extreme floods or droughts could curtail some of its operations, but characterizes the likelihood as unknown and the risk low. Its primary management tool for these risks is insurance. In its CDP response, the company does not address the fact that insurance companies are increasingly denying claims associated with climate-related events, and raising premiums based on climate risk. In its 2016 Form 10-K, regarding these and other catastrophic events, management says, “Third-party insurance may not provide adequate coverage or Occidental may be self-insured with respect to the related losses.”

Board climate competence and oversight—While Occidental Petroleum makes no mention of this in its proxy filings, the company has a board member, Elisse B. Walter, who demonstrates a strong awareness of climate change risk. Walter, who has served on the company’s board since 2014, is also on the board of the Sustainability Accounting Standards Board (SASB). At a February 2017 conference, Walter pointed to a 2016 SASB bulletin that reported 72 out of 79 industries, representing \$27.5 trillion or 93 percent of U.S. capital markets, are significantly affected in some way by climate risk.

In February 2017, Occidental Petroleum’s board of directors added to the Environmental Committee’s charter the responsibility to regularly review climate-related risks and opportunities. Ms. Walter is one of the members of the Environmental Committee.

Greenhouse Gas Emissions & Reduction Efforts

Occidental Petroleum has a [page](#) on its website dedicated to greenhouse gas emissions estimates. It shows that after several years of average growth

in absolute emissions, the company posted a year-on-year decline from 2014 to 2015 (the most recent year for which it has published data). Its 4-year emissions performance is shown in the image above.

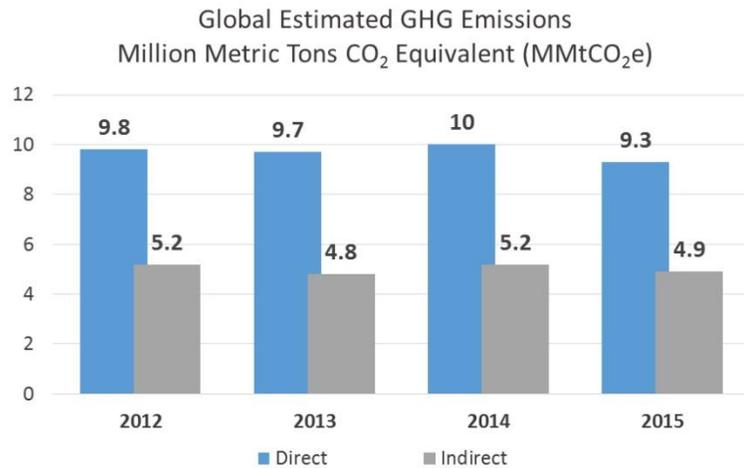
Occidental Petroleum reports that its greenhouse gas emissions intensity relative to oil output decreased by 18.7 in the past year. The company attributes this to “modest growth in production” and “efficiency improvements combined with divestiture of assets and reduced gross emissions.”

In its 2016 response to CDP’s climate change survey, Occidental Petroleum says it has no emissions reduction targets, explaining:

Fossil fuels and fossil-fuel derived chemicals are essential to the dramatic increases in life expectancy, industrial productivity, life-saving technology innovation and economic wealth generation. Oxy does not believe that setting absolute GHG emission reduction goals is an effective way for an oil, gas and chemical company to supply life-essential products while responsibly managing climate risks. Oxy will continue to report publicly and transparently on its overall GHG emissions management and environmental stewardship programs. As the company engages with its stockholders and representatives of relevant government and regulatory agencies on effective ways to mitigate and adapt to climate change, Oxy’s position on the relevance and effectiveness of emissions target(s) may evolve.

Methane emissions: The company maintains a [page](#) on its website dedicated to methane emissions management. It details the following voluntary and compliance-based efforts to constrain methane emissions, which it says have led to a reduction of almost 8.3 million metric tons of carbon dioxide equivalents (CO₂e)—the equivalent of 2.4 coal-fired power plants—from 1990 through 2005. Readers may wish to consult *Si2’s 2017 Briefing Paper on Environmental Management* for more information on the technologies mentioned below.

- Adopting lower emission thresholds to eliminate leaks and to repair connections (e.g., valves, flanges, pump seals).
- Adopting “green completion” practices to capture gas at the wellhead during well completion and prevent its release to the atmosphere.
- Replacing diesel generators and engines with electric drives, where feasible.
- Installing air supply systems to control instruments, rather than using natural gas controls and instruments.
- Installing Vapor Recovery Units (VRUs) to capture and recover gas from certain equipment, rather than venting to atmosphere.
- Adopting better control devices (e.g., low-bleed or no-bleed pneumatic valves) to reduce methane emissions.
- Adopting cutting edge monitoring systems to help identify and eliminate sources of fugitive emissions.



Occidental Petroleum does not report on its methane emissions intensity, and does not set any targets for these emissions.

On the subject of flaring—which is both environmentally damaging and a waste of a product with economic value—Occidental Petroleum says it strives to minimize its use of the practice. It notes, “gas streams are flared for safety reasons when gas processing plants have planned shutdowns or during turnarounds, enabling inspections, repairs and maintenance activities that cannot occur during operation to be performed safely.”

Occidental Petroleum says in its CDP response that it does not disclose emissions from the flaring of natural gas in foreign countries where the state-owned oil company owns the gas. The company says these emissions are relevant and calculated. It does not explain in its CDP response why it does not disclose these types of emissions. The company does provide more detail on its website, saying that its operation in Qatar was historically its largest source of gas flaring, and this was because Qatar had no domestic or export market for natural gas. In recent years, Occidental has worked with its Qatari partner to reduce flaring by “shipping it to Mesaieed for treatment and use by Qatar Petroleum as a feedstock or fuel, reinjecting it for enhanced oil recovery and using it to generate electricity for Oxy Qatar’s operations.” Through these efforts, Oxy Qatar has reduced flaring emissions from 2005 to 2015 by 98 percent, and continues to pursue additional reductions. Occidental Petroleum does not discuss its company-wide flaring performance or reduction initiatives.

The CDP climate change survey includes a section asking companies to break out their methane emissions by emissions category: combustion, flaring, process emissions, vented emissions and fugitive emissions. Occidental Petroleum left this section blank.

STAR Program—Occidental joined the EPA’s [Natural Gas STAR program](#), a voluntary program that encourages companies to recover or reduce methane emissions, in 2004. The EPA recognized Occidental in 2008 as Production Partner of the Year and in 2009 for Five Years of Continuing Excellence. Occidental reports that its ongoing efforts under this program have helped keep its estimated greenhouse gas emissions growth rate from oil and gas operations well below its rate of increased production.

Global Methane Initiative (GMI)—Occidental reports in its 2017 proxy statement that it participates in the GMI, which promotes cost-effective, near-term methane recovery through partnerships between developed and developing countries, with participation from the private sector, development banks, and nongovernmental organizations. The Steering Committee is chaired by the EPA.

Carbon capture and storage (CCS): Occidental Petroleum places a great deal of emphasis on its CCS and enhanced oil recovery¹ (EOR) activities as a means of constraining its greenhouse gas emissions. The company describes itself as an industry leader in these technologies, and characterizes underground injection of carbon dioxide, especially as practiced during EOR, as “a ready and proven method for the large-scale geologic sequestration of CO₂ that otherwise would be emitted to the atmosphere.” For more on these technologies, and the challenges associated with them that render Occidental’s statement questionable, readers may consult *Si2’s 2017 Briefing Paper on Environmental Management*.

Occidental Petroleum and other CCS champions view it as the key to continuing to exploit reliable hydrocarbon assets while capturing their greenhouse gas emissions. However, many experts do not see

¹ Enhanced oil recovery (EOR) is the implementation of various techniques for increasing the amount of crude oil that can be extracted from an oil field. In Occidental Petroleum’s case, one of its EOR techniques involves injecting carbon dioxide into oil fields to recover oil that otherwise would not have been extracted using traditional methods.

the technology as currently viable, and it is increasingly implicated, along with other underground injection techniques, in the recent proliferation of earthquakes across the country, known as induced seismicity.

Engineers are working on methods to capture and store the carbon dioxide now emitted from coal-fired power plants. CCS typically involves three steps—capture of CO₂ at the power plant; transport of the high-pressure gas via pipeline to a storage site; and injection and storage of the CO₂ underground. While the techniques to implement all three of these steps are well understood, significant challenges remain in applying them at the scale and pace required to reduce greenhouse gas emissions. Barriers include significant additional power consumption, increased water use, massive expansion of existing pipeline networks, environmentally safe storage and induced seismicity.

There are currently 38 large-scale CCS projects in operation or construction around the world, of which 20 should be operational by the end of 2017. In recent years, insufficient financing and legislative support have inhibited growth in CCS, and [these challenges](#) persist. CCS remains expensive and, so far, its prospects for economic viability are far from certain.

Many companies have invested massive sums in developing CCS plants and technologies. Most CCS projects in the United States appear beset by constant set-backs and cost overruns. In January 2017, the first large-scale CCS plant in the United States became fully [operational](#). The Petra Nova plant, partially owned by **NRG Energy**, reportedly cost more than \$1 billion. The plant operators say it captures more than 90 percent of the CO₂ released from its coal combustion, which is subsequently used for EOR; this could add a revenue stream, but the underground injection techniques are increasingly suspected of contributing to induced seismicity.

Meanwhile, a coal-fired industrial plant in southern India has [begun](#) successfully capturing CO₂ emissions and converting them to soda ash, also known as baking soda. The project's developers say the process, which will capture up to 60,000 tons of CO₂ each year, is the world's first successful, industrial-scale example of carbon capture and utilization. According to the developer's [press release](#), it costs just \$30 per ton to capture the CO₂, compared to the \$60 to \$90 per ton price tag that came with previous carbon capture systems. Occidental Petroleum does not disclose its costs per ton for its CCS operations.

The Indian technology uses a form of salt to bond with CO₂ molecules exiting the plant's boiler system. The plant then reuses the captured gas to make soda ash, used in the manufacturing of a variety of other products, including glass, paper, and detergents. It is too soon to tell what effect this development might have on the broader market, but it seems possible that companies betting on larger CCS projects that so far have proved uneconomic may find themselves outstripped by this more nimble, effective technology.

Occidental Petroleum has more than quadrupled the amount of carbon dioxide it has stored underground since 2014, and intends to continue on this trajectory. It recently gained first-ever approval from the EPA to use a Measuring, Reporting and Verification (MRV) Plan to measure and account for the amount of greenhouse gases that are injected and sequestered underground through our EOR operations in West Texas. Occidental Petroleum will begin reporting annual data to the EPA's Greenhouse Gas Reporting Program, starting with data for 2016. The company accurately notes in its 2016 CDP response that the Intergovernmental Panel on Climate Change and the International Energy Agency project that most climate models cannot achieve the 2-degree scenario without using CCS technologies. Both agencies qualify their statements with recognitions of the risks involved.

External Assessments of Climate Change Performance and Disclosure

Several independent bodies have evaluated Occidental Petroleum's performance and disclosure on climate change strategy and greenhouse gas emissions performance and disclosure.

Oil majors' climate risk: In November 2016, [Influence Map](#), a non-profit that evaluates corporate influence on civil society policy, published a report evaluating the climate risk of 10 global oil majors, including Occidental Petroleum. In [The Oil Majors and Climate Risk: What Investors Need to Know](#), Influence Map scored the companies on four climate issues “currently being driven in part by significant regulatory pressures which are likely to impact revenue streams and costs and includes an analysis of financial disclosures, focusing on SEC filings.” According to the report, the key risk issue to oil majors is the proliferation of zero emission vehicles (ZEV) and hybrids, resulting in decreasing demand for petroleum products used in road vehicles, which on average provide at least 35 percent of gross revenue of the oil majors. The research found scant disclosure by the oil and gas majors on their precise projections for ZEV penetration and impact on gasoline/diesel sales. This theme echoes a number of the shareholder resolutions this year related to climate change strategy, many of which cite various sources on the threat posed by the rapid transition to cleaner or no transportation fuels.

In the report, Occidental ranked third to last, behind **ExxonMobil** and **Chevron**, “suggesting these three warrant particular investor scrutiny.” The report identified the following issues with Occidental Petroleum:

- Occidental uses an undisclosed internal price on carbon on new projects. It has limited disclosure on the business impact of increased pricing and has not communicated a climate-related reserve impairment policy. Occidental has been [accused](#) of using its political spending and lobbying decisions to oppose regulations aimed at greenhouse gas emissions reduction.
- Occidental has not communicated a clear estimate of future electricity generation or the total energy mix. It has limited disclosure on the business impact of an increasing market share for renewables. Occidental was [implicated](#) in 2010 in opposing a ballot measure in California to expand renewable energy uptake.
- Occidental Petroleum has not communicated clear estimates on low/zero-carbon vehicles. It does not appear to have disclosed on the business impact of low/zero-carbon vehicle proliferation. Occidental [appears](#) to have been involved in an effort to undermine a 2014 European initiative to vehicle emissions standards.
- Occidental has not clearly communicated a long-term, group-wide greenhouse gas emissions reduction target. It has a mixed disclosure on the business impacts of future greenhouse gas emission reductions. Occidental is also on record in a [letter](#) to the EPA opposing greenhouse gas emissions standards.
- The report calculates that Occidental Petroleum derived 36 percent of its 2015 gross revenues from vehicle fuel, exposing it to risk from the low/zero-carbon vehicle transition.

Fracking-related disclosure rating: Occidental Petroleum was among the companies rated in the most recent [2016 Disclosing the Facts](#) report. Readers may consult *Si2's 2017 Briefing Paper on Environmental Management* for more on this annual report on companies' reporting of hydraulic fracturing-related impacts. This year, Occidental ranked 15th out of 28 companies evaluated. The company ranked especially poorly on the section regarding air emissions, scoring just one out of a possible 10 points. Occidental's single point was for its participation in voluntary emissions reduction programs. The other nine areas where the company did not provide disclosure were as follows:

- On a shale-by-shale basis:
 - Use of natural gas or other reduced emission methods to power well pad operations
 - Substituting pipelines for trucks to move water or waste
- On a non-play-specific basis:

- Percentage of vehicle fleets converted to lower-emission fuels
- Methane emission rates from drilling, completion and production operations
- Percentage or number of high-bleed valves replaced with lower emission valves
- Scope of leak detection and repair programs
- Frequency of monitoring by leak detection and repair programs
- Methane emission reduction goals
- Greenhouse gas emission reduction goals

By way of comparison, BHP Billiton received all 10 points on air emissions criteria, while six companies received zero.

Ceres rating on 10-K disclosure: In a February 2014 [report](#) analyzing climate change disclosures in 2012 Form 10-Ks by S&P 500 companies, Ceres gave Occidental Petroleum a score of only 2 out of 100. Ceres contrasted **Noble Energy** with Occidental Petroleum, another international oil and natural gas exploration and production company that had a substantially smaller market capitalization than Occidental. Ceres reported that Noble Energy included about ten times as much climate disclosure in its 2012 10-K, including separate subsections in both the risk factors and the Management Discussion and Analysis sections of the report.

Industry and Investor Initiatives

On December 14, 2016, a 20-nation task force released [guidelines](#) for voluntary climate risk disclosure by companies and investors in financial filings. The Task Force on Climate-Related Financial Disclosures (TCFD), set up by Bank of England Governor Mark Carney in his role as head of the G20's Financial Stability Board, recommends that all companies "describe the potential impact of different scenarios, including a 2°C scenario, on the organization's businesses, strategy, and financial planning," and provides more specific guidance for companies in the oil and gas, coal and electric utilities sectors due to the unique vulnerabilities of these industries. The TCFD offered 11 specific recommendations for all industries, divided into four topics: governance, strategy, risk management and metrics and targets. They include:

All companies should benchmark strategic and financial planning using a 2-degrees Celsius economic scenario as their baseline for analyzing climate risks and opportunities. (As discussed earlier in this report, even two degrees Celsius of average global temperature increase could be too much to prevent catastrophic impacts.)

All companies should disclose information related to water, energy usage and efficiency, land use and revenues from products and services designed for a low carbon economy.

BHP Billiton, a global mining, metals and petroleum company, has adopted a [planning process](#) that "uses scenario analysis to encompass a wide spectrum of potential outcomes for key global uncertainties." In a 2015 [report](#), BHP Billiton outlined four possible scenarios ranging from an orderly transition to a 2-degree world to a shock event that leads to a much more rapid transition to a 2-degree Celsius world by 2030.

Other oil and gas companies have begun using scenario analysis to assess the direction of their businesses and to assure investors that they are poised to take advantage of new opportunities. For example, **Total** issued a [report](#) in 2016 that discusses how a 2-degree scenario affects the company's decision-making process, discusses its targets for reducing the carbon intensity of its operations over time and includes the endorsement of its board of directors for this approach. Other companies beginning to use a 2-degree scenario analysis in their business planning include **ConocoPhillips**, **Statoil** and **Shell**.

Potential Disruptions to the Oil & Gas Industry

According to the International Energy Agency (IEA), transportation [accounts](#) for more than one-fifth of global carbon dioxide emissions and is likely to rise, [requiring rapid adoption](#) of new technologies to keep temperatures within the 2-degree Celsius limit set by the Paris Agreement. The IEA and the International Council on Clean Transportation [forecast](#) that transport electrification will play a critical role in achieving required greenhouse gas reductions by 2050. Sales of electric vehicles (EV) are [on the rise](#): in 2016, U.S. EV sales rose by 37 percent in the United States and 41 percent globally. **Statoil's** CEO recently [predicted](#) that oil demand would peak in 2020 with “a shrinking oil industry” as vehicles are electrified. A recent [report](#) from Carbon Tracker and the Grantham Institute calls “business as usual” predictions of slow growth in the market for EVs a “high risk strategy,” and urges use of a range of scenarios to evaluate future demand.

An October 2016 [Fitch Ratings report](#) warned that oil companies faced a “resoundingly negative” threat from the recent and growing proliferation of electric cars. “Widespread adoption of battery-powered vehicles is a serious threat to the oil industry,” says the report, which urges energy companies to plan for “radical change” spurred by new technologies that could arrive more quickly than expected. Ratings agency Moody's [announced](#) in June 2016 that it would begin analyzing carbon transition risk based on the 2-degree scenario. Moody's noted the particular risk exposure of the energy sector. In February 2017, Moody's published a [subsequent report](#) asserting that future shifts in U.S. climate policy—which are likely under the new Trump administration—would not stall global emissions reduction efforts.

Increased fuel efficiency for internal combustion engines could reduce demand for gasoline and diesel fuels. According to Obama-era regulations, efficiency requirements for light-duty vehicles are slated to increase to 54.5 miles per gallon by 2025, and agencies under the previous administration had been considering standards leading to significant reductions in fuel consumption for medium and heavy-duty trucks. President Trump has expressed his intention to roll back fuel efficiency standards. At the same time, California has the clout to enforce its own more stringent standards, and has stated its willingness to go up against the new administration. California's market share is so significant that vehicle manufacturers typically find it more efficient to conform their entire U.S. production to the state's requirements, rather than to produce separate vehicles for the rest of the country. It remains uncertain how this will play out.

Shareholder Support for Item 5

On April 12, 2017, the California Public Employees' Retirement System (CalPERS) announced that it would vote in favor of this proposal and encouraged other shareholders to follow suit. CalPERS is the largest state public pension fund in the United States with \$311 billion in total assets under management, and owns approximately 3,350,000 shares in Occidental. CalPERS explained its reasoning in an [SEC filing](#):

Consistent with the CalPERS Investment Beliefs, we believe effective management of environmental factors, including those related to climate change risk increase the likelihood that companies will perform well over the long-term [sic]...

After completing a review of the CalPERS global equity portfolio, we identified 100 companies as significant carbon emitters responsible for over 50% of the portfolio's total carbon emissions. CalPERS defines these companies as systemically important carbon emitters (SICEs) – with Occidental Petroleum Corporation being one of them. Further, we believe proposal #5 is of particular significance in light of the global consensus regarding climate change and emission reduction targets reflected in the Paris Agreement. The importance of the proposal's request is also underscored by the efforts of Financial Stability Board (FSB), an international body mandated by G-20 leaders to develop efficient climate-related financial risk disclosures.

II. Proponent Positions

Item 5: Report on climate change

The Nathan Cummings Foundation wants Occidental Petroleum to assess annually the “long-term portfolio impacts of plausible scenarios that address climate change,” explaining “how current capital planning and business strategies incorporate analyses of the short- and long-term financial risks of a lower carbon economy,” evaluating “the impacts of fluctuating demand and price scenarios on the company’s existing reserves and resource portfolio.”

Given the Paris agreement, the proponent believes it would be wise for shareholders to request scenario analyses and stress testing under the International Energy Agency’s (IEA) 450 scenario, which refers to 450 parts per million of CO₂ in the atmosphere and is consistent with the 2-degree target set in the treaty.

The resolution says shareholders need to review how the company is positioned to respond to changes in the market. The proponent notes that Occidental Petroleum acknowledges the significant impact a carbon price would have on its business, and says investors require analyses regarding this prospect. The resolution requests “information to help assess Occidental’s long-term resilience and how it expects to perform under a range of carbon scenarios,” noting the near-majority support for this resolution last year.

The proponent highlights some of Occidental’s peers and competitors that are providing disclosure in line with that requested in this proposal:

- Ten oil and gas companies announced a shared ambition to limit the global average temperature rise to 2 degrees Celsius (Oil and Gas Climate Initiative);
- **Shell, BP, and Statoil** endorsed the “Strategic Resilience for 2035 and Beyond” shareholder resolutions, which received almost unanimous support in 2015; **Suncor** endorsed a similar resolution with overwhelming support in 2016;
- **ConocoPhillips and Total** test capital planning decisions against multiple carbon-constrained scenarios and disclose the results.

The proponent believes that the requested report’s publication would “demonstrate to shareholders that Occidental is strategically planning to remain competitive in a carbon-constrained future and generate continued value for shareholders.”

Item 7: Report on methane emissions/reduction targets

Arjuna Capital is asking Occidental Petroleum for the fourth year in a row for a report “reviewing the Company’s policies, actions, and plans to measure, disclose, mitigate, and set quantitative reduction targets for methane emissions and flaring resulting from all operations under the company’s financial or operational control.” The proponent is concerned about the potency of methane as a greenhouse gas and the role that methane emissions from the oil and gas industry play in exacerbating climate change. The proponent notes the United States has become one of the top 10 gas flaring countries in the world. The resolution also notes that reducing methane emissions in upstream oil and gas production is one of four policies proposed by the International Energy Association (IEA) that “could stop the growth in global energy-related emissions by the end of this decade at no net economic cost.” Further, the proponent is concerned about recent studies that find methane emissions in the oil and gas sector are substantially higher than previously understood, and that leakage rates vary significantly by source.

Arjuna emphasizes that a failure by companies to proactively reduce methane emissions may not only invite more rigorous regulations, but also have a direct economic impact on Occidental Petroleum, as lost and flared gas is not available for sale.

Arjuna Capital would like Occidental to issue a report on its policies, actions and plans to measure, disclose, mitigate and set quantitative reduction targets for methane emissions and flaring resulting from all Occidental's operations. The proponent recommends that Occidental include:

methane leakage rate as a percentage of production, the quantity of flared and vented hydrocarbons, how the company is measuring and mitigating emissions, best practices, worst performing assets, quantitative targets, and methods to track progress over time. Best practice strategy would utilize real-time measurement and monitoring technologies.

III. Management Positions

Item 5: Report on climate change

Occidental Petroleum's board says it recognizes the importance of "economic and policy assessments" taking place around the world, including those associated with the Paris agreement and the 2-degree scenario. Management suggests that it has plans to expand its reporting along the lines of the proponent's request, without providing specifics:

As we continue to enhance our disclosures to address climate-related risks and opportunities, we are guided by the four elements of the Financial Stability Board's Recommendations of the Task Force on Climate-related Financial Disclosures. We are currently expanding our disclosure of how climate-related issues are relevant in our current governance, strategy and risk management practices, which practices are described further below, and evaluating enhancements to our scenario planning process to explicitly incorporate climate-related risks and opportunities.

The board highlights its recent expansion of its Environmental Committee's duties to include responsibility for regularly reviewing climate-related risks and opportunities. Management also asserts that its existing capital planning and business strategies "incorporate risks of a lower carbon economy," and that its forecasting and stress-testing cover a broad range of factors that can affect the company's operations and profitability. Regarding business strategy, the board says:

A key strategy is to focus on mature hydrocarbon basins that have existing infrastructure that enable us bring reserves to production near-term. This shorter-cycle delivery approach is lower risk and drives operational efficiencies. The majority of our operations have the shorter time horizons common to the E&P sector. So, for Occidental, scenario planning is largely an exercise measured in years, not decades. As such, Occidental is well situated to shift capital allocation in the face of changing climate-related risks and opportunities.

The board emphasizes the company's significant investment in and expansion of carbon capture and storage, including for enhanced oil recovery, saying this puts the company "to do well in – and not just survive – a carbon constrained future." Management notes the fact that the Intergovernmental Panel on Climate Change and other expert agencies believe some form of carbon sequestration is essential to meeting the 2-degree scenario.

Management concludes by saying that it has been reporting its climate risk strategy and associated information through CDP since its inception in 2003, and provides additional information on its website.

Item 7: Report on methane emissions/reduction targets

Occidental's board of directors opposes this proposal on the grounds that the company already addresses the proponent's concerns, rendering a separate report unnecessary. The board points to its existing initiatives promoting the conservation and efficient use of natural resources and reduction of air

emissions from Occidental's operations. The board also says the company already "actively pursues the capture and beneficial use of methane in all of its operations, in conjunction with business partners and host governments." Management points to Occidental's voluntary implementation of numerous projects worldwide to expand the beneficial use or sale of field gas, including methane, citing its work with the EPA's Natural Gas Star program and the Global Methane Initiative.

The board goes on to enumerate Occidental Petroleum's various methane emissions control projects, as described earlier in this report, pointing to the reductions it has realized since 1990. Management also highlights the company's successful efforts to significantly reduce flaring in its Qatari operations.

Management also notes that the EPA and its counterparts in various countries and states have recently adopted or are in the process of adopting regulations to further reduce methane emissions. Noting that these regulations address reporting and control of methane emissions from hydraulic fracturing and other well completion and stimulation techniques, natural gas processing and transportation facilities, and from oil and gas storage facilities, the board concludes that "these regulatory programs are likely to achieve the objectives of the request more effectively and uniformly than the shareholder's proposed ad hoc approach."

IV. Analysis

Si2's 2017 Briefing Papers on [Climate Change](#) and [Environmental Management](#) contain a general analysis of issues investors may want to consider. The following analysis is specific to Occidental Petroleum.

Key Points at Issue

- Is Occidental Petroleum sufficiently reporting on how it is positioning the company in response to climate-related risks?
- Is Occidental's management of and reporting on methane emissions reduction adequate?

Oil and natural gas operations are the core of Occidental's business. The company does not appear to perceive climate change to pose any risks beyond those resulting from regulatory changes. Management specifically says that it does not believe greenhouse gas emissions reduction targets are appropriate for an oil, gas and chemical company that provides "life-essential products." The company has some methane emissions controls in place that go beyond its regulatory obligations, and has made significant headway in reducing flaring in its Qatari operations. However, it does not report on a number of aspects of greenhouse gas emissions in general and methane emissions specifically, particularly as relate to the totality of its operations.

One proponent, Arjuna Capital, raises concerns about growing evidence that anthropogenic climate change is already having serious impacts on the environment and society, that these impacts are highly likely to increase in severity and that global regulatory bodies will take increasingly stringent steps to constrain the greenhouse gas emissions that are responsible for the majority of atmospheric warming. Arjuna specifically raises the 2-degree scenario, which reflects what had been a general scientific consensus that average global temperatures must not increase more than 2 degrees Celsius in order for catastrophic impacts to be averted. Recent research, however, strongly suggests that even 2 degrees of warming would be devastating, and the most recent discourse is turning toward a 1.5-degree scenario. Within this context, the proponent wants to know more about how Occidental Petroleum is planning for a transition to this new, low-carbon future.

The Paris climate treaty reached in December 2015 initially prompted optimism from many about new prospects for a real shift in global government action to address climate change. The outcome of the 2016 presidential election and the new Trump administration's stated intention to abandon many of the

U.S. existing climate initiatives may delay some movement at the federal level. Nonetheless, many large institutional investors are convinced that companies and governments must take urgent action to address climate risks; they are paying ever closer attention to how their portfolio companies are strategically situated to handle climate-related risks and opportunities, despite the continuing U.S. political dysfunction that puts meaningful national energy legislation out of reach in the short term. Many analysts believe that regulation is inevitable, given the scope and impact of the problem, and that if such regulation is delayed, it will constitute a greater shock when it is ultimately passed. They argue that companies would create a strategic advantage by adjusting their business models now. Indeed, many leading global asset managers are now advocating for greater climate change risk management and disclosure, and do not believe that a temporary shift in U.S. policy will derail decarbonization efforts. Furthermore, states may step up climate change mitigation efforts in the face of federal inaction.

An independent analysis of oil majors' climate change risk exposure identified the proliferation of low/zero-carbon vehicles as a key threat to the industry, noting that Occidental derives about 36 percent of gross earnings from vehicle fuels. The company does not specifically address this risk, but it does discuss a decline in demand and low commodity price environment as direct challenges to its business.

Some utilities and energy companies are providing the type of information suggested by the proponent; **NRG Energy**, **Xcel** and **Enel**, for instance, have set greenhouse gas emission targets aligned with achieving a 2-degree scenario, while **ConocoPhillips**, **Statoil** and **BHP Billiton** have conducted 2-degree scenario analyses through 2040. BHP Billiton also reports thoroughly on its methane emissions—including leakage rates, emissions by source, targets and more—in much the manner that the Nathan Cummings Foundation requests.

Occidental Petroleum places great emphasis on its carbon capture and storage (CCS) projects as a mechanism for mitigating its greenhouse gas emissions. Indeed, management makes numerous, strongly optimistic statements about how CCS technology will allow the company to thrive in a low-carbon environment. However, substantial doubt surrounds the technology's fundamental economic viability, as well as its safety and apparent correlation with induced seismicity. Shareholders will need to weigh their satisfaction with what appears to be a major bet on the company's part on an expensive strategy that remains far from a sure thing.

At the same time, Occidental Petroleum seems to be sending out small hints that it is contemplating some of the issues the proponents raise this year. It specifically said in its statement of opposition that it is using the Financial Stability Board's recommendations as a guide in developing expanded climate-related disclosure, though it offers few details on its plans. The company this year added climate-change oversight to the board's Environmental Committee's responsibilities. And Occidental has a board member who also sits on SASB's board, and this year made public statements about the imperative of climate change risk management. It seems improbable that she would have done so on a rogue basis. It is likely that last year's near-majority vote on the climate change proposal served as a nudge to management, among other factors. Investors will need to decide whether they wish to encourage the company further in this direction.

Voting Considerations

Item 5: Report on climate change

Votes in favor—Investors who share the proponent's view that the company should provide further analysis of potential scenarios that could both limit demand for its fossil fuel products and increase their costs of production will vote in favor of the resolution. They are likely to agree that future restrictions are possible and could have a material effect on the company. They also may believe the company's oil and gas reserves could see a significant drop in value under certain low-carbon scenarios and

that management's related analyses and action plans are key to assessing their investment in the company and could help the company to plan for a more profitable future.

Votes against—Investors who are satisfied with the company's existing reporting on climate change and related risks will vote against the resolution. These investors also likely to be satisfied with the company's assurances that it is addressing climate change challenges, and see proof of this in the company's reductions in flaring and methane emissions. These investors may also be persuaded that CCS technology will be the linchpin to controlling carbon emissions in the future, and that Occidental's approach is competitive.

Item 7: Report on methane emissions/reduction targets

Votes in favor—Investors who share the proponent's concern about methane emissions risk to the company are likely to vote in favor of the resolution. They are likely to agree that companies in the oil and natural gas industry need to establish quantitative reduction targets and strengthened management systems to achieve the necessary reductions. Shareholders voting for the proposal also are likely to favor additional reporting on efforts to incorporate best practices, including measurement methodologies.

Votes against—Investors who believe Occidental provides sufficient information on its methane emissions, and who are satisfied with the company's assurances that it is actively pursuing the capture and beneficial use of methane, are likely to vote against the resolution. These shareholders are likely to agree that the resolution is unnecessary given recently adopted or upcoming regulations on reporting and control of methane emissions in the oil and gas industry.

Resources

- Occidental's 2017 Proxy Statement
https://www.sec.gov/Archives/edgar/data/797468/000130817917000065/loxy2017_def14a.htm
- Occidental's 2016 Form 10-K
<https://www.sec.gov/Archives/edgar/data/797468/000079746817000003/oxy10k12-31x2016.htm>
- Occidental Petroleum 2016 CDP Response (*available free after registration*)
<https://www.cdp.net/sites/2016/49/13649/Climate%20Change%202016/Pages/Disclosure-View.aspx>
- *Oil Majors and Climate Risk: What Investors Need to Know*
<https://influencemap.org/report/Oil-Majors-and-Climate-Fraud-ea2a6a78ed809d2b5f83495e37828b5e>
- *Disclosing the Facts 2016: Transparency and Risk in Hydraulic Fracturing Operations*
<http://disclosingthefacts.org/2016/>