PROMISES, PROMISES: EVALUATING CALPERS' CLIMATE ENGAGEMENTS

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FOSSIL FREE CALIFORNIA

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ABSTRACT

CalPERS seems to have an unshakeable faith in the ability of shareholder engagement to transform fossil fuel companies into clean energy providers. This report reviews CalPERS' engagement history with 10 selected Big Oil companies from its portfolio, to test whether engagement is producing real-world results.

We looked at CalPERS' proxy voting patterns and companies' reports on greenhouse gas emissions to determine the effects of engagement. So far, the clearest result has been a "net zero by 2050" pledge by most (but not all) of these companies.

Our research gave us greater insight into the complex and difficult path that CalPERS has chosen. We found that companies' self-reported emissions data may not be reliable; that even large investors such as CalPERS have limited access to company directors; and that even the leverage of a multi-trillion-dollar coalition such as Climate Action 100+ may not be sufficient to change the course of the "business as usual" juggernaut of the fossil fuel industry.

We conclude that engagement alone is unlikely to convince fossil fuel companies to transform at the speed and scale required. When companies fail to change after years of engagement, divestment should be the consequence.

CalPERS views divestment as a last resort, but it's worth noting that fossil fuel companies themselves use divestment to lower their greenhouse gas emissions or to meet other business objectives.[1] The ultimate goal is to diminish the continued production of fossil fuels, no matter who owns the shares of the producers.

While divestment is not "the answer," divestment should be part of the equation.

SUMMARY

The California Public Employees' Retirement System (CalPERS) controls the largest public pension portfolio in the United States. CalPERS has pledged to decarbonize its portfolio by 2050, with a further promise to reduce emissions by 50% by 2030.[2]

CalPERS, a large shareholder in all major corporations, relies on shareholder engagement (using both private and confidential meetings and public votes at Annual General Meetings) to encourage the companies in which it invests to achieve "net zero by 2050" and other goals. CalPERS consistently rejects divestment unless required by legislation.

This report profiles ten "Big Oil" companies from CalPERS global equity investments to evaluate whether CalPERS engagement has influenced the business practices and the emissions-reduction performance of these companies.

Because CalPERS' ownership of equity and bonds helps finance the operations of many of the largest and heaviest global emitters, our evaluation of how well these engagements are working provides an important case study of the role of engagement in rapidly decarbonizing the global energy system.

KEY FINDINGS

Overall, we found that CalPERS' engagement strategy has not put these 10 companies on track to meet the stated goal of Net-Zero by 2050.

1. Even when CalPERS acts as an engagement lead, as it has with Exxon, Chevron and Occidental, **we have not seen a reduction in emissions at the speed and scale required.**

2. CalPERS' engagement efforts have not led to a business strategy for **phasing out a company's production of fossil fuels** or **transitioning the company to producing carbon-free energy.**

3. CalPERS' proxy voting guidelines are focused on disclosure rather than implementation, and their proxy votes **have not resulted in observable progress toward reducing emissions**.

4. **When engagement goals are not met, the consequences seem minimal.** CalPERS might vote against one or more Board Directors, as they have done at Chevron and Exxon, but replacing a few directors doesn't reduce carbon emissions or change the business strategy. Moreover, the shareholder resolutions that CalPERS and other asset owners might support are usually non-binding.

Data Set: Evaluation of Ten Oil Majors

To assess the effects of CalPERS engagement, this study profiles 10 major oil companies in which CalPERS has large equity holdings.

These companies are on the CU200 list of the one hundred oil and gas companies with the largest fossil fuel reserves.[3] They include companies from the United States and Europe, plus Russia.

Table 1 lists the 10 selected companies, CalPERS percent ownership and the latest available data on the market value of their holdings. Although CalPERS percent ownership is very small (compared to, say, private investment banker BlackRock), these ten investments still represent almost **$4.2 billion dollars** of retirees' money.

TABLE 1. CALPERS PERCENT OWNERSHIP AND MARKET VALUE OF 10 OIL MAJORS (2021)

	PERCENT OWNERSHIP	MARKET VALUE
Exxon Mobil Corp.	0.22%	$1,251,114,696
Chevron	0.23%	$605,315,473
Occidental Petroleum	0.20%	$297,064,623
TotalEnergies	0.22%	$380,313,539
Equinor	0.06%	$126,524,971
ConocoPhillips	0.23%	$195,347,194
ENI SpA	0.20%	$138,687,892
Royal Dutch Shell	0.23%	$695,723,130
BP p.l.c.	0.22%	$323,419,437
Gazprom	0.11%	$161,563,069

Investment totals do not include bonds.

Source: *Calculated by authors from CalPERS 2021 Portfolio.*[4]

A note about CalPERS' tiny ownership percentage: Even with billions invested, CalPERS is a minority shareholder with limited influence. CalPERS needs the support of other large asset owners and asset managers to encourage companies to meet engagement objectives, hence the reliance on coalitions such as Climate Action 100+, which we describe in the next section.

CALPERS' ENGAGEMENTS ON CLIMATE

CalPERS has been trying to address climate change through coalitions of shareholders for over seven years. In 2015, CalPERS created a carbon footprint of its global equity investments and flagged 80 companies that were responsible for more than 50% of the portfolio's emissions.

Two years later it co-founded Climate Action 100+ (CA100+)[5], which today is a coalition of 700 large investors whose assets total $68 trillion, and who work together to engage with 167 heavy-emitting focus companies that collectively account for 80 percent of corporate industrial greenhouse gas emissions.[6] These 167 companies are grouped into fifteen sectors. The ten companies examined for this study are among the thirty-nine CA100+ oil and gas focus companies.

The approach of the CA 100+ alliance is for member representatives to act as engagement leads who advocate for three climate goals:[7]

1. **climate awareness** in the company's governance;
2. **disclosure of climate risk** using the TCFD (Task Force on Climate-Related Financial Disclosures)[8] guidelines; and
3. **setting a goal** of net-zero by 2050.

In the last 5 years, CalPERS has been an engagement lead at 22 focus companies, including the oil and gas companies ExxonMobil, Chevron, and Occidental.

CA 100+ has developed a Net-Zero Benchmark that examines companies' progress toward a goal of net-zero by 2050. Almost two-thirds of CA 100+ focus companies have now set a net-zero goal.[9]

However, a CA 100+ report in 2022 shows that only 20% of the CA 100+ Net-Zero Benchmark goals are being met.[11]

A 2020 Washington Law Review article extolling engagement by large institutional shareholders, based on the goal of maximizing portfolio profits rather than firm profits, focuses on company pledges to specific emission reduction targets, while admitting that how these targets will be met without reducing production is unclear in the absence of a business rationale.[10]

CALPERS' ENGAGEMENT PROCESS

CalPERS engages with "portfolio companies to encourage them to consider how environmental, social, and governance (ESG) risks and opportunities affect their ability to create value over the long-term."[12]

For our evaluation, we define a successful engagement strategy as one that ensures companies meet the IPCC goals[13] of reducing carbon dioxide emissions *by 45 per cent by 2030* from 2010 levels, in order to reach net-zero emissions by 2050.[14]

Such an engagement strategy must ensure that companies *meet* specific CO^2 emission targets by agreed-upon dates. *Setting* emission targets is not enough: oil company CEOs already admit among themselves that their public goals cannot be met with their current business models. A recent Congressional hearing revealed that oil majors made public commitments to net-zero emissions, but their internal communications revealed they had no such intentions.[15] And none of the Carbon Majors CEOs would pledge to stop lobbying against meaningful action on climate change. Overall, the Congressional hearings showed that the primary outcome of public pressure to achieve net zero emissions has been empty climate pledges along with deceptive advertising, rather than a meaningful business strategy to reduce emissions.[16]

Clearly, a successful engagement strategy must have *specific consequences* if promised targets are not met. This study compares companies' actual carbon emissions to a trajectory compatible with the IPCC targets. We also look at company investments in oil exploration and expansion because according to the IEA, **no new fossil fuel exploration and no new oil and natural gas fields are required if we are to reach net zero by 2050.[17]**

The corporate engagement process puts shareholders at a disadvantage: although large shareholders such as CalPERS can hold private and confidential meetings, their public positions are not revealed until their votes on directors and shareholder resolutions are recorded. It's like being able to make "public comments" only once a year.

The next sections look at CalPERS' recorded votes, its alignment or divergence from positions noted by CA 100+ and other allies, and its explanations for some of its notable proxy votes. As background we outline CalPERS' engagement categories and proxy voting guidelines.

ENGAGEMENT CATEGORIES

Formally, CalPERS uses three broad categories to classify its engagements:

1. **Ad hoc Engagements:** These are generally triggered by specific events and are centered around controversies or governance concerns.
2. **Routine Engagements:** These involve calls with the portfolio companies during the proxy voting offseason and prior to casting a vote at annual general meetings. Routine engagements do not overlap with ad hoc or initiative-based engagements.
3. **Initiative-based Engagements:** These are related to CalPERS' strategic and core initiatives outlined in the Total Fund Governance & Sustainability 5-Year Strategic Plan.[18]

Shareholder Proxy Voting at the Annual General Meeting (AGM) gets special attention as a public sign of engagement during "AGM season." In preparation, CA 100+ flags shareholder resolutions and director votes of interest. Although CA 100+ efforts are collaborative and loosely coordinated at regional, national, and global levels, engagement efforts are voluntary. Each signatory investor is free to decide their own votes and otherwise take independent action in line with their own policies. From the CA 100+ website: "All signatories to Climate Action 100+ are independent fiduciaries and vote in accordance with their own voting principles and independent internal investment analysis. Climate Action 100+ as an initiative will not file shareholder resolutions, nor require that investors support specific shareholder resolutions."[19]

James Andrus, interim managing director for Board Governance & Sustainability, emphasized that CalPERS is an independent actor that votes its proxies according to its internal policies, and not according to the flags of CA 100+ or other partners.

Without citing specifics, CalPERS asserts that "in general, companies are responding favorably by improving the governance of climate-related risks, curbing GHG emissions, and strengthening climate-related financial disclosures."[20] These reported results would be in line with the three climate goals of CA 100+.

In the remainder of this report, we examine whether actual company performance in these three areas appears to have improved since the 2015 Paris Agreement, by examining the following engagement activities and specific metrics of company performance:

1. **CalPERS' proxy votes on climate-related shareholder resolutions and on directors**, noting differences from positions flagged by the CA 100+ and Ceres;
2. **Performance on the Climate Action 100+ (CA 100+) benchmark;**
3. **Scope 1 and 2 emissions** reported to the Carbon Disclosure Project (CDP);
4. **Emissions intensity** reported by the Transition Pathway Initiative (TPI); and
5. **Exploration expenses and expansion plans.**

CALPERS PROXY VOTES AND GUIDELINES

The end products of CalPERS' engagement activities are votes at companies' Annual General Meetings (AGMs) on shareholder resolutions and on directors, committees, and management proposals. Shareholder resolutions are proposals (usually non-binding) put forward by investors to advocate for an action a company should take.

In the next sections, we look at CalPERS' votes at AGMs to see whether they align with climate goals and with the recommendations of the CA 100+ and other allies.

As background, we note that CalPERS' AGM proxy votes follow their board-approved *Proxy Voting Guidelines*,[21] which are in turn informed by their *Governance & Sustainability Principles*.[22] In the environmental section of the Proxy Voting Guidelines, there are four suggested voting patterns, and all include *increased disclosure* of climate-related risks and opportunities. The focus on disclosure is echoed in more detail in the CalPERS Governance & Sustainability Principles, where the section on "Environmental Management Practices" lists environmental risks that need to be identified, disclosed, and managed, and outlines good practices for disclosure, Board oversight, and risk management. The good practices for disclosure follow the categories used by the Task Force on Climate-Related Financial Disclosures (TCFD)[23] and by Carbon Disclosure Project (CDP)[24] for its self-reported company data collection.

Because disclosure has been shown not to have a direct impact on emissions,[27] it is difficult to argue that these guidelines alone would result in proxy votes that would push carbon intensive companies to reduce their greenhouse gas emissions.

PROXY ADVISORY SERVICES IMPLEMENT CALPERS VOTES

With hundreds of thousands of proxy votes on the table, CalPERS uses its guidelines to broadly determine its positions, and follows up with proxy advisory services such as Glass Lewis[25] and ISS[26] (Institutional Shareholder Services) to carry out its recommendations. For their part, the proxy advisory services overwhelmingly advise voting with management, so when CalPERS votes against directors or otherwise diverges from this norm, it is a significant signal.

According to James Andrus. out of the universe of votes at AGMs for several thousand equity holdings in CalPERS' portfolio, only a small number of votes are selected for active discussion and review by the CalPERS staff. Votes that differ from those recorded with the proxy advisory service are decided on a case-by-case basis with reliance on the principles established by the Board of Administration. If necessary, items are elevated higher in CalPERS to ensure a wider view. For example, CalPERS has begun to vote against certain directors of Climate Action 100+ focus companies that have not complied with basic requirements.

The CalPERS Board of Administration reviews and approves shareholder engagement policy

(the Guidelines referenced above) but the Board does not participate in decisions on individual proxy votes.

INCONSISTENT VOTES ON SHAREHOLDER RESOLUTIONS

The CA100+ alliance flags votes on climate-related shareholder resolutions and "other" votes on board directors, auditors, and/or climate transition plans.[28]

Using public data from the GlassLewis advisory service, we reviewed CalPERS' votes on shareholder resolutions for our 10 selected companies and found a troubling pattern of inconsistencies and continued support for business as usual. CalPERS' votes were recorded in an "Engagement Tracker" by Ceres, a non-profit working to advance climate solutions through engagement, and a co-founder of CA 100+.[29]

In 2022, Ceres reported 14 climate resolutions that made it to a vote at our 10 selected companies. CalPERS voted in favor of 9 of the resolutions and voted against the remaining 5 resolutions. The record shows that CalPERS does vote against climate proposals filed by shareholders, even if they are supported by Climate Action 100+ and agencies such as Ceres.

For example, CalPERS voted *against* a shareholder proposal filed by "Follow This" at Occidental's 2022 annual meeting.[30] The proposal asked Occidental to establish and publish quantitative emissions reduction targets that cover short-, medium- and long-term Scope 1, 2, and 3 emissions of the company. The proposal also wanted Occidental to report on the strategy and underlying policies for reaching these targets. These requirements basically mandated that Occidental fulfill five of the 10 criteria of the Climate Action 100+ Net Zero Benchmark. Ceres also supported this shareholder proposal.[31] (The resolution was, ultimately, overwhelmingly rejected by shareholders.)[32]

CalPERS' "no" vote at Occidental is puzzling, considering that this proposal is well-aligned with CalPERS proxy voting guidelines, which call for increased disclosure. In fact, CalPERS supported the same Follow This shareholder proposal at Exxon, Chevron and ConocoPhillips, but voted against the resolution at Occidental, Equinor, Shell and BP.

LACK OF ALIGNMENT WITH CA 100+ ON DIRECTOR VOTES

For the 2022 proxy season, CalPERS did align itself with 10 out of the 11 shareholder resolutions flagged by CA 100+, and in 2021, CalPERS voted in favor of *all* the shareholder resolutions flagged by CA 100+. **However, CalPERS aligned their votes with only 7 out of 25 "other votes" elevated by CA 100+ colleagues.** Ultimately, only 4 of the 11 CA 100+ flagged shareholder proposals passed, and none of the 26 CA 100+ flagged "other" votes passed (as of May 26, 2022). That said, CA 100+ points out that some tracked proposals are withdrawn after investors reach agreements with a company ahead of a vote. CA 100+ thinks this demonstrates that companies are taking shareholder proposals seriously.[33]

The strength of Climate Action 100+ lies in its numbers, but the alliance might be more powerful if members consistently supported the coalition's recommendations.

A 2021 study by the European Corporate Governance Institute finds that engagement is most effective when "... there are lead investors who head the dialogue and there are supporting investors collaborating with the lead."[34] The paper finds a dual-engagement approach with lead engagers backed by a coalition of investors to be the most effective – it is this approach that the Climate Action 100+ has tried to build.

When CalPERS and other large asset owners fail to support CA 100+ recommendations, the coalition's leverage is diminished.

WHY CALPERS MIGHT REJECT SHAREHOLDER PROPOSALS

CalPERS' James Andrus explained that CalPERS significant proxy votes are decided on a case by case basis, and take into account any "insider knowledge" the engagement staff have gained from private and confidential discussions with a company. As an engagement lead for Occidental, CalPERS would have had on-going conversations with Occidental regarding their performance on the net zero benchmark and other targets, with internal agreement on specific performance goals. This information is not made public, so it is impossible to compare CalPERS internal evaluation of Occidental's targets and performance with those of the Follow This shareholder resolution. CalPERS might have rejected the Follow This proposal at Occidental because it believed that Occidental was already doing this work.

Interestingly, CalPERS also voted "No" on the identical GHG reduction proposal at Shell in 2021, saying, "CalPERS has concerns with the duplicative nature of the proposal and its binding intent. The Company has already disclosed an energy transition strategy where the Company outlines its views on how its targets are aligned with the goals of the Paris Agreement. The Company has established a net zero ambition (Scopes 1, 2, and 3) aiming to reduce the carbon intensity of the energy products it sells by 100% by 2050."

And again at Shell in 2021, CalPERS noted that, "For 2021, CalPERS voted to abstain from all management proposals that request shareowner approval of their climate risk strategy. We do not believe that an up/down vote will provide additional insight at this stage."

CalPERS' statements on its vote and abstention at Shell sound solidly supportive of Shell – a faith which seems unwarranted in light of recent disclosures on greenwashing.[35]

CALPERS VOTES ON DIRECTORS

In addition to proxy voting on shareholder resolutions, CalPERS and other shareholders vote on new and returning directors of the boards of these companies. CalPERS usually votes to re-elect all directors, but may vote against re-electing one or more directors to indicate disapproval of the job they have been doing.

According to James Andrus, CalPERS engagement staff generally do not communicate directly with company directors, so voting against a director is therefore one of the few ways to indicate dissatisfaction. Votes against directors can even result in replacing current directors, as happened in 2021 when a coalition of investors, including CalPERS, seated three new directors at Exxon.[36]

In 2022, CalPERS voted in favor of 85% of the directors for the 10 selected companies. For 6 of the 10 companies, namely Occidental, Equinor, ConocoPhillips, Shell, TotalEnergies and BP, CalPERS voted to elect all board members, suggesting approval of the work done in their previous terms. However, when we look at the changes in these companies' performance in the CA 100+ Net Zero Benchmark (NZB) from 2021 to 2022 (see below), we find that **these companies, by and large, did not make improvements.**

This year's proxy season and a review of past votes shows that CalPERS usually continues to support directors regardless of a company's failures to make progress on reducing emissions.

However, this year CalPERS voted against *all* of the members of Chevron's Public Policy & Sustainability Committee, saying: "CalPERS is voting against the members of the Public Policy & Sustainability Committee (A. Gast, E. Hernandez Jr., J. Huntsman and D. Umpleby) for failing to adequately respond to the Climate Action 100+ engagement initiative." (See "Notable Proxy Votes" on the CalPERS website).[37]

MEASURING THE EFFECTS OF ENGAGEMENT

Now that we've examined CalPERS' engagement votes and guidelines, we measure engagements' effects using data from the CA 100+ Net Zero Benchmark, the Carbon Disclosure Project, the Transition Pathways Initiative, and the Global Gas and Oil Exit List. **The question here is whether engagement is resulting in any real-world reductions in emissions or slowing of expenditures on new and expanded production.**

THE CA 100+ NET ZERO BENCHMARK

In 2021, Climate Action 100+ developed the "Net Zero Benchmark" (NZB)[38] to assess companies' progress across nine criteria (with a tenth to be added).[39] These criteria gauge company alignment with a net zero future and point out actions a company should take to move toward net zero.

The 2022 NZB company assessment report[40] shows that **only 5 of our 10 companies** (Occidental, TotalEnergies, Equinor, ENI SpA, Royal Dutch Shell) **have set net zero emissions targets** (criterion 1), and this is the criterion with the *highest* rate of compliance. *None* of the 10 companies has set the short-term or medium-term emission reduction goals (criteria 3 and 4) needed to achieve net zero by 2050.

Overall, the ten companies are performing poorly on the NZB in 2022 (see Figures 1 and 2, below).[41] Only 17% of the nine criteria are fully met by our 10 selected companies, 62% are partially met, and 21% are not met at all. According to the CA 100+, none of the 10 companies is adequately planning and restructuring to decarbonize their capital expenditures (criterion 6), and only one company (Chevron), has a decarbonization strategy that meets NZB criterion 5.

A comparison of the 2022 NZB to the 2021 NZB (Figures 2 and 3) for the ten companies shows a slight improvement in eight criteria, with one criterion (Capital alignment) showing no change.

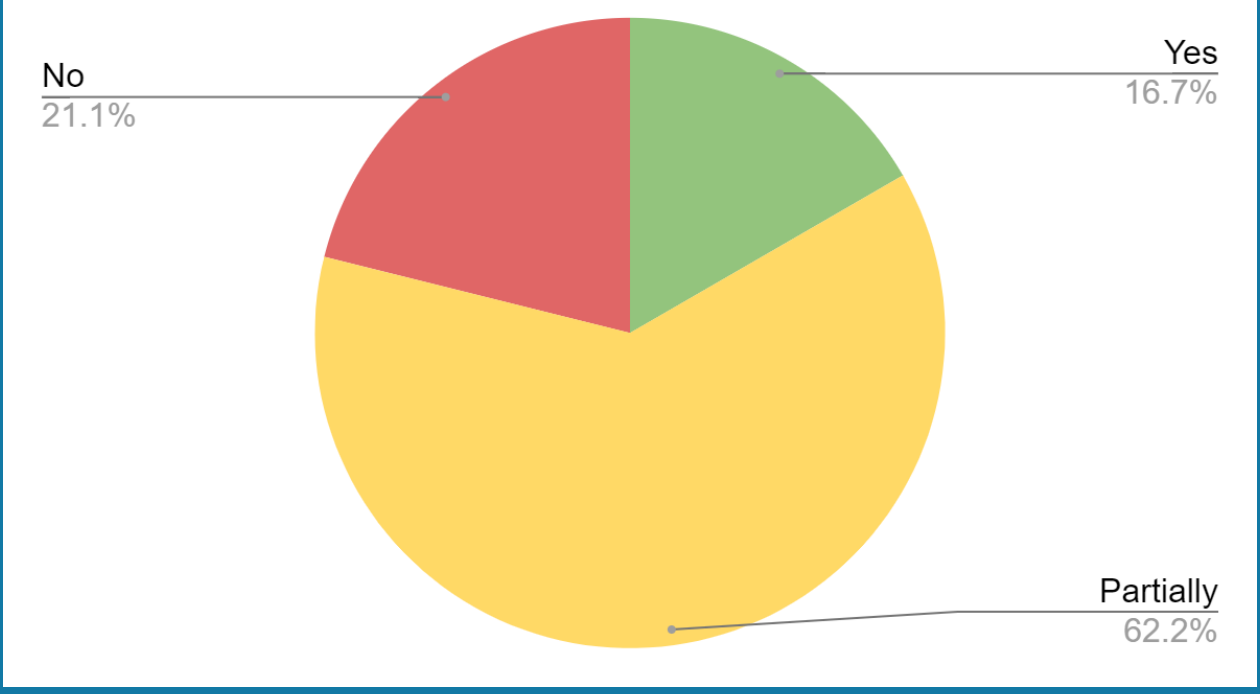
When we examined the NZB performance between 2021 and 2022 for our six selected companies for which CalPERS voted to elect all nominated Board members (mentioned above), we found that Shell is the only company which showed an improvement in the NZB. Shell advanced from partial to full fulfillment of setting a net zero emissions target (criterion 1). There were no NZB changes between 2021 to 2022 for Occidental and ConocoPhillips.

Two companies performed *worse* on the NZB benchmark in 2022 when compared to 2021: Equinor went from full fulfillment to partial fulfillment of Climate Governance, and BP went from partially meeting to not meeting any criteria for Capital Alignment.

The CA100+ Net Zero Benchmark indicates that these ten companies are making little or no yearly progress in improving their poor NZB ratings. So far, shareholder engagement is not leading to adequate and reliable progress toward Net Zero GHG reductions.

The figures below are derived from the CA 100+ Net Zero Benchmark reports.[43]

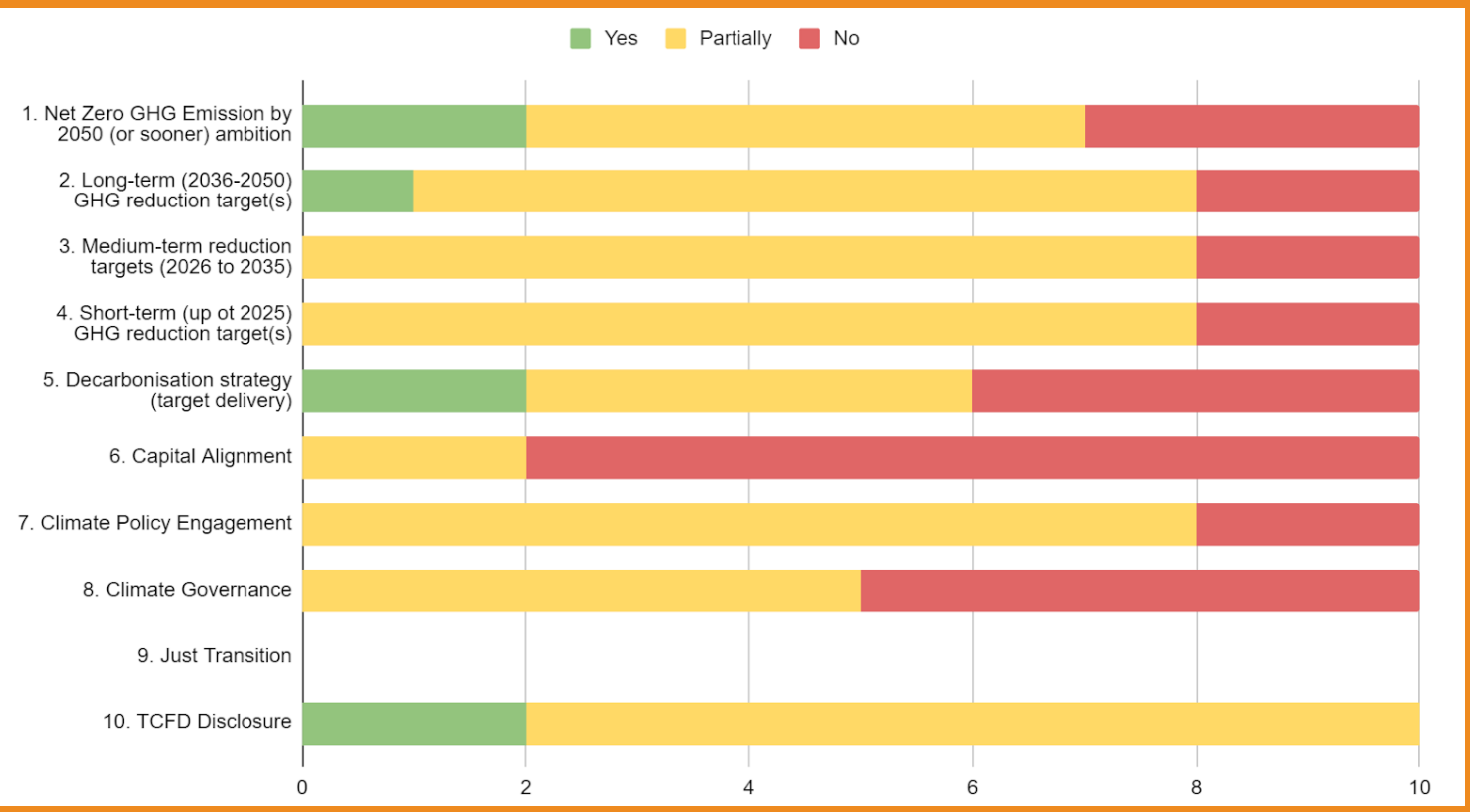
FIGURE 1. CLIMATE ACTION 100+ CRITERIA STATUS (10 SELECTED COMPANIES)



Source: *Calculated by authors from Climate Action 100+ Net Zero Benchmark reports.*[42]

FIGURE 2. 2022 NET ZERO BENCHMARK REPORT (10 SELECTED COMPANIES)

FIGURE 3. 2021 NET ZERO BENCHMARK REPORT (10 SELECTED COMPANIES)



Source: *Calculated by authors from Climate Action 100+ Net Zero Benchmark reports.*[44]

MORE METRICS: EFFECTS OF ENGAGEMENT ON EMISSIONS AND CARBON INTENSITY

In the following sections, **we measure the effects of CalPERS' climate-related engagements to see whether voluntary pledges and target-setting are resulting in actual greenhouse gas emissions reductions that align with a 1.5°C or 2°C warming scenario.** (Since CalPERS current portfolio has a warming potential of 3.23°C,[45] there's ample room for improvement.)

Emissions are categorized as Scope 1, 2, and 3. Scope 1 refers to direct emissions from company-controlled operations; Scope 2 refers to indirect emissions from purchased energy; Scope 3 includes all other emissions from the company's value chain, including purchased inputs and use of sold products.[46]

Currently, CA 100+ and other initiatives only require companies to report Scopes 1, 2, or 3 emissions on a voluntary basis. This study uses the Carbon Disclosure Project (CDP) data,[47] which CalPERS mentions under good practice for disclosures (above), to evaluate the extent to which our 10 selected companies have reduced Scope 1 and 2 emissions over time. Unfortunately BP, Shell and Exxon have, at various times, *stopped reporting* to the CDP; therefore, we show their annual emissions data when reported, but exclude their emissions from the running average from 2013 to 2020. (See Graphs 1-4.)

We did not analyze Scope 3 emissions, because none of the 10 companies reported complete Scope 3 emissions: many analysts have noted that self-reported Scope 3 data are unreliable and use different definitions, so that they cannot be compared. There's an urgent need to standardize reporting of

Scope 3 emissions: IHS Markit data estimates that Scope 3 emissions account for around 88% of oil and gas sector emissions.

Of necessity, we look at the *carbon intensity* of company output – the preferred metric used by the oil and gas companies. Since carbon intensity usually measures only Scope 1 and 2 emissions, and Scope 3 emissions are not reported or not known, this is only a partial metric. A decline in emissions intensity does not demonstrate that a company is reducing the total GHG emissions caused by the production and consumption of their products.

From 2013 to 2020, many companies achieved a small decline in Scope 1 emissions in 2016 or 2017, following the 2015 Paris Agreement. (See Graph 2). However, no decline and in some cases a slight increase in Scope 1 emissions occurred from 2018 until 2020, when emissions declined along with a decline in energy demand caused by the pandemic-induced recession. The average Scope 1 emissions for seven companies reflect this pattern (see Graph 1). Overall, Scope 1 emissions went down by 17.4% (49.2 million t/CO2e to 40.7 million t/CO2e) over the seven-year period from 2013 to 2020.

The much lower-volume Scope 2 emissions are more volatile across companies (see Graph 4), and also declined in 2020 with the recession. The seven-company average Scope 2 emissions declined by 30.8% (5.2 million t/CO2e to 3.6 million t/CO2e) from 2013 to 2020 (see Graph 3). operations (including purchased energy).

Together Scope 1 and Scope 2 declined 18.6% from 2013 to 2020, with much of the decline occurring in 2020. *Note that Scope 1 emissions declined only 6.2% between 2013 and 2019, compared to the much larger 17.4% decline when 2020 is the end date.*

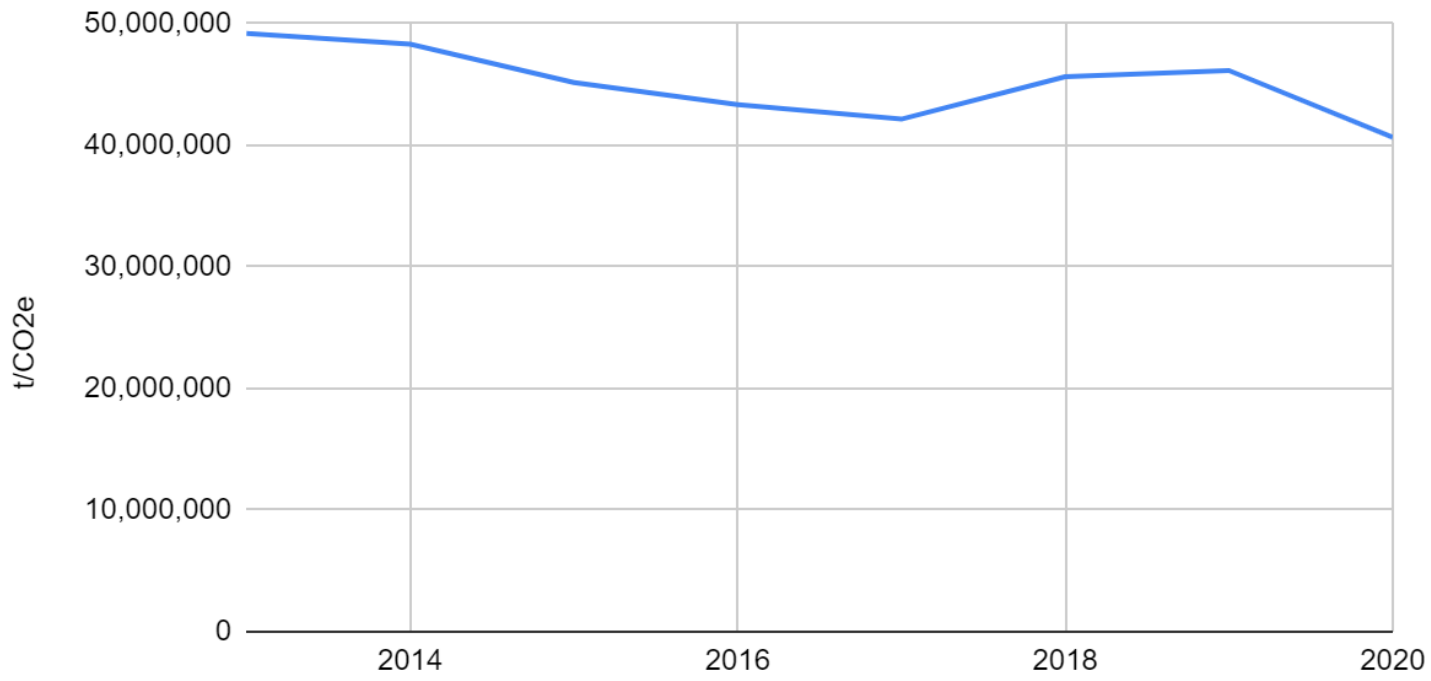
Extrapolating from this 7-year trend for the seven companies to predict future declines in Scope 1 and Scope 2 emissions is problematic because of the decline attributable to the 2020 recessionary year. Even including the pandemic-related decline in energy production and excluding the very large Scope 3 emissions, the 7-year average decline crudely predicts that zero emissions would not be reached until around 2065. Thus, these oil and gas companies aren't on track to reach zero emissions for their own operations (including purchased energy) by 2050.

A report on industry leaders in GHG emissions reduction includes four oil and gas companies we studied: BP, TotalEnergies, Eni SpA, and Shell. BP and TotalEnergies had similar GHG emissions in 2021 (35.5 million TCO2e) and these were about one-half of the Shell GHG emissions (69 million TCO2e). BP and TotalEnergies reduced their GHG emissions by over 30% from 2012 to 2021, while Shell reduced emissions by only 15% over the period. The other oil companies did even worse than Shell in reducing emissions.[48]

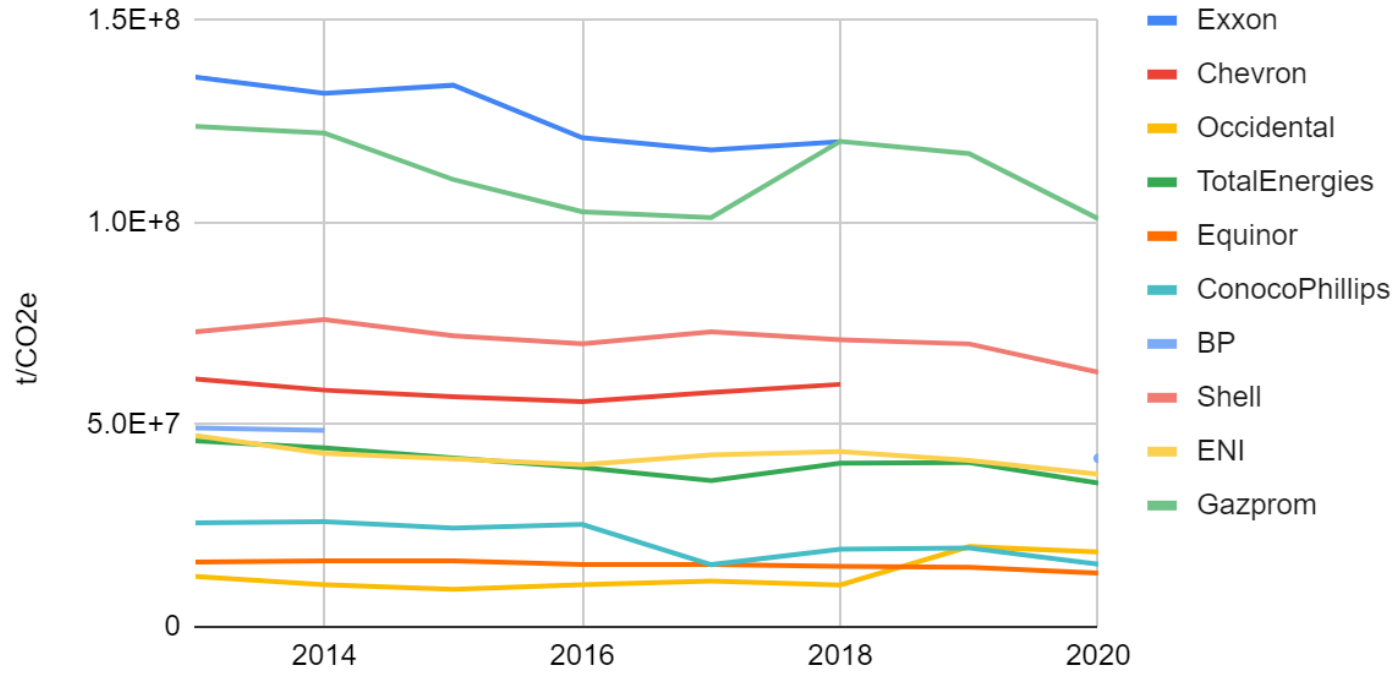
These emissions data indicate that the ten major oil and gas companies did not make much progress in reducing their Scope 1 and 2 emissions between 2013 and 2022. This finding is in line with the findings of CA 100+: focus companies are not on a trajectory with medium-term emissions reduction targets aligned with 1.5°C, despite their increased net zero commitments by 2050.[49]

Clearly the current engagement process is not providing the emissions reductions trajectory required to reach a 1.5°C goal.

GRAPH 1. AVERAGE SCOPE 1 EMISSIONS (7 OUT OF 10 COMPANIES)

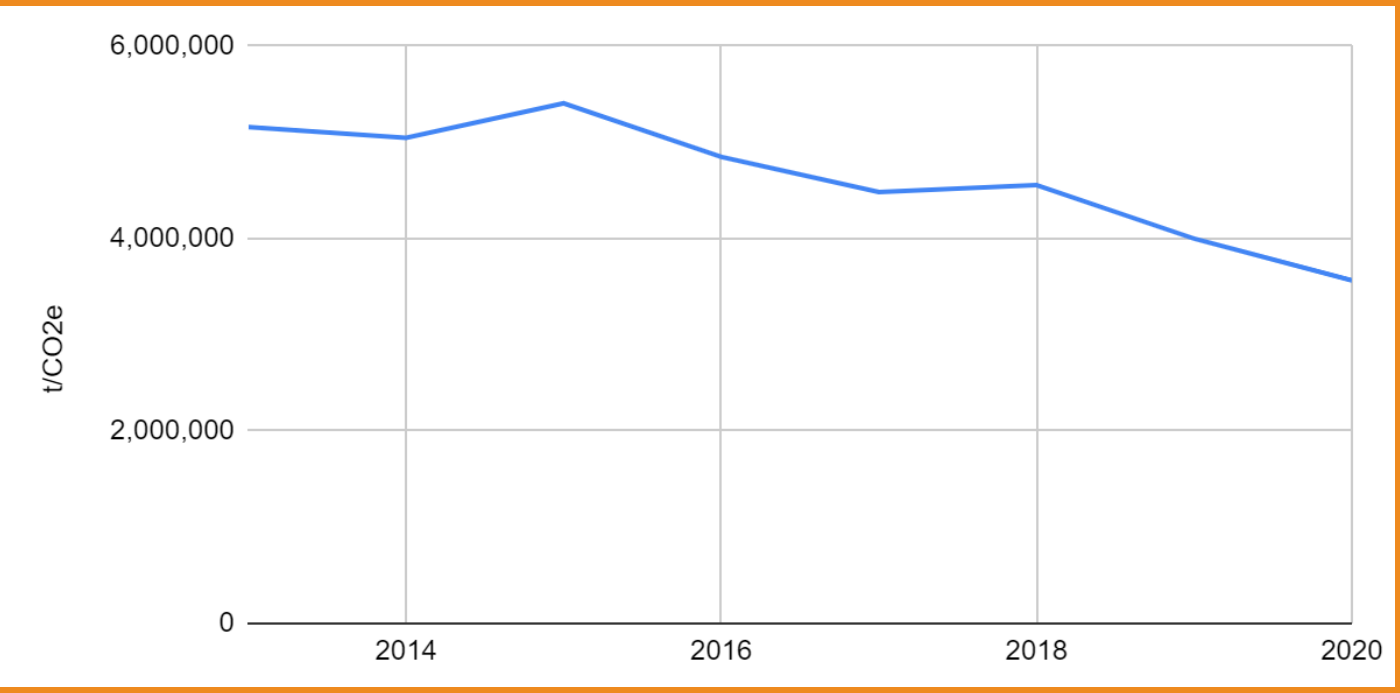


GRAPH 2. SCOPE 1 EMISSIONS

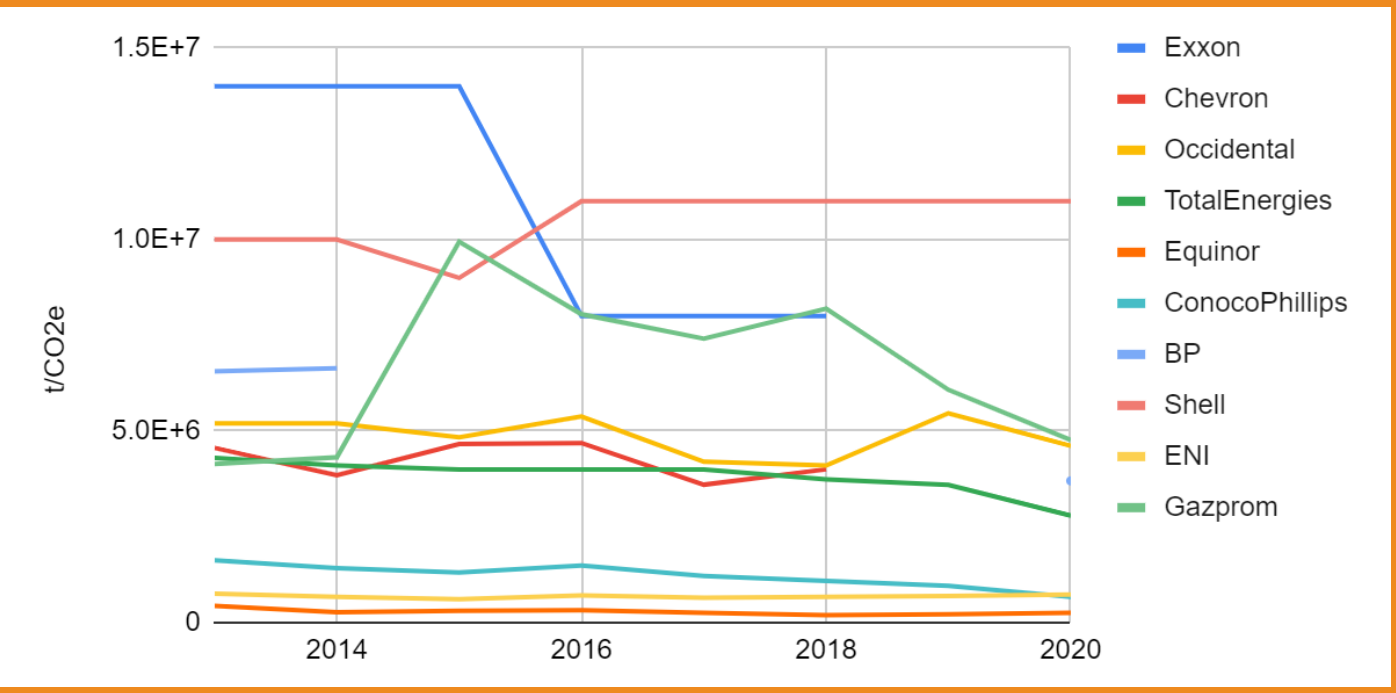


Source: *Calculated by authors from CDP Data.*[50]

GRAPH 3. AVERAGE SCOPE 2 EMISSIONS (7 OUT OF 10 COMPANIES)



GRAPH 4. SCOPE 2 EMISSIONS



Source: *Calculated by authors from CDP Data.*[51]

ISSUES WITH CDP DATA

We note that the CDP cannot guarantee the validity of its data because the data are voluntarily self-reported, and do not have the same quality or auditing requirements as, say, financial data reported to the SEC. This lack of quality assurance seems to be evident in the CDP data reported by our ten selected companies.

For example, ExxonMobil reported 14 million t/CO2e Scope 2 emissions in 2013, 2014 and 2015, followed by an unexplained reduction to 8 million t/CO2e in 2016, 2017 and 2018 (the last year they reported to the CDP). The unsubstantiated report of a sharp emission reduction, as well as the obviously rough emission estimates repeated year to year, suggest that we cannot rely on ExxonMobil's data.

Similar sharp reductions, rounding and recycling of numbers reported from year to year are present to various degrees throughout the emissions data for the nine other companies investigated. Unfortunately, this makes it difficult to trust even the slow trend in emissions reductions suggested by the data.

MINOR DECREASES IN EMISSIONS INTENSITY

To further our understanding of how well aligned the 10 selected companies are with a net zero by 2050 goal, we also reviewed the data from the Transition Pathway Initiative[52] (TPI).[53] CalPERS is a supporter of the Transition Pathway Initiative, which (according to the TPI website) is an "independent, authoritative source of research and data into the progress being made by the financial and corporate world in making the transition to a low-carbon economy."

The TPI looks at emissions intensity, which it defines as Scope 1, 2 and 3 greenhouse gas emissions from energy products sold externally in units of grams of CO2 equivalent (gCO2e) per megajoule (MJ).[54] The data is sourced from publicly available, company disclosed data. This includes CDP questionnaires and a company's own reports, such as their sustainability reports.

TPI creates a benchmark pathway for emissions intensity in each key industry sector, based on a time path of the carbon emissions consistent with meeting a specific climate target, such as limiting global warming to 1.5°C or 2°C, divided by a time path of the sector's physical production.[55] TPI uses data for the oil and gas sector from International Energy Agency (IEA) reports.

Graph 5 shows the TPI emissions intensity data since the Paris Agreement for nine of our 10 selected companies (excluding Gazprom whose data was incomplete). In 2020, the average emissions intensity for the selected companies was 70.4 gCO2e/MJ, well above the 62.09 sector average emissions intensity required to align with a 2.0 or 1.5 degree scenario.

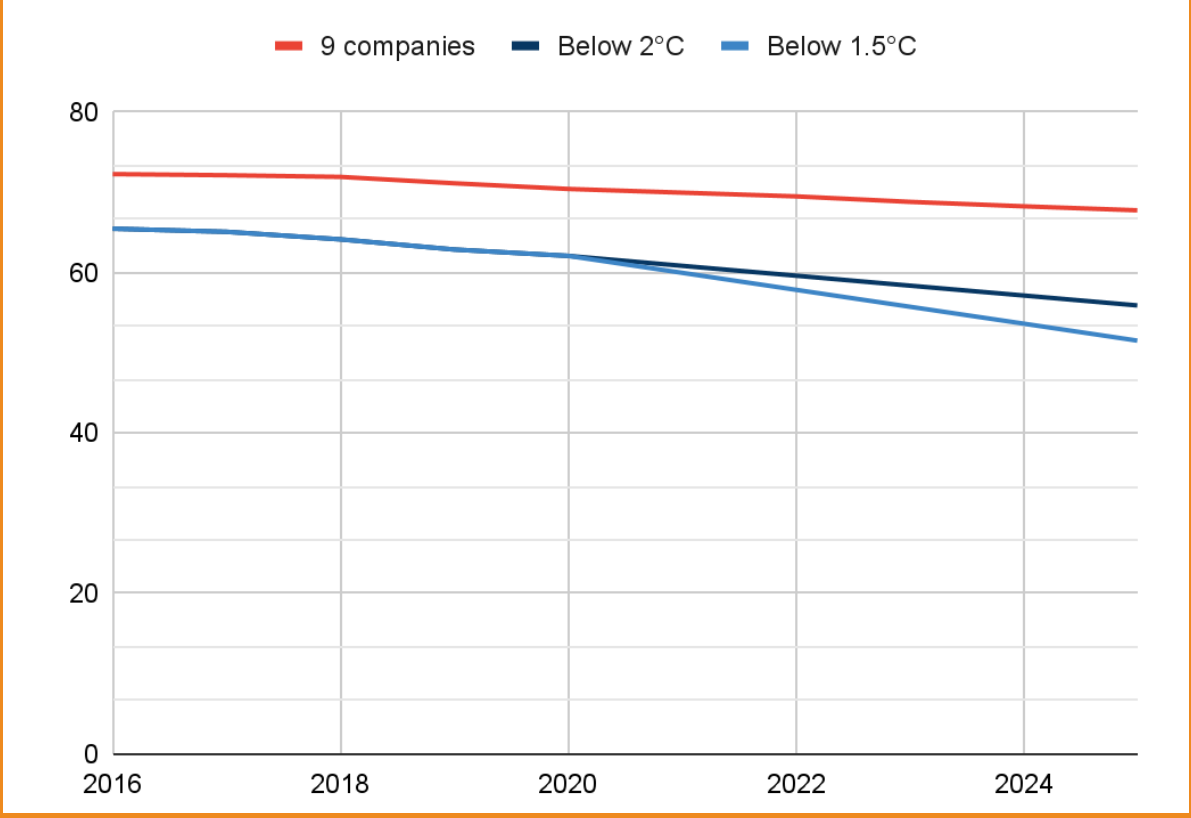
For the years after 2020, the TPI has projected how much average emissions intensity has to decline each year to reach 1.5°C and 2°C benchmarks from the IEA's "Net Zero by 2050" report[56] (represented by the blue line.) The estimated reductions in emissions intensity for the selected companies is based on their reduction targets and shows that with the current emission targets, these companies are not on track to reduce their emissions intensity at the speed and scale required, and are projected to move even further away from the TPI's simulated 1.5°C and 2°C benchmarks.

CONTINUED SPENDING ON EXPLORATION AND EXPANSION THREATENS CLIMATE GOALS

The IEA's Net Zero by 2050 roadmap made it clear that there can be no new oil and gas exploration and production if we are going to keep 1.5°C within reach. A recent Carbon Tracker report outlines the potential for stranding of fossil fuel assets if companies do not act to reduce emissions. The majority of companies have not set medium-term emissions reduction targets aligned with 1.5°C, nor have they fully aligned their future capital expenditures with the goals of the Paris Agreement.

Thus, exploration expenses indicate whether companies are transitioning away from a fossil fuel reliant business model. An oil well produces oil for 20 to 30 years on average, thus continued exploration and opening of oil fields could potentially maintain the level of GHG emissions well past 2050. Graph 6 shows that the amount spent on exploration has varied. There is no clear indication that these companies have actively tried to reduce their exploration expenses since the Paris Agreement. (There was an expected drop in 2020 due to the pandemic.)

GRAPH 5. EMISSIONS INTENSITY (9 COMPANIES)

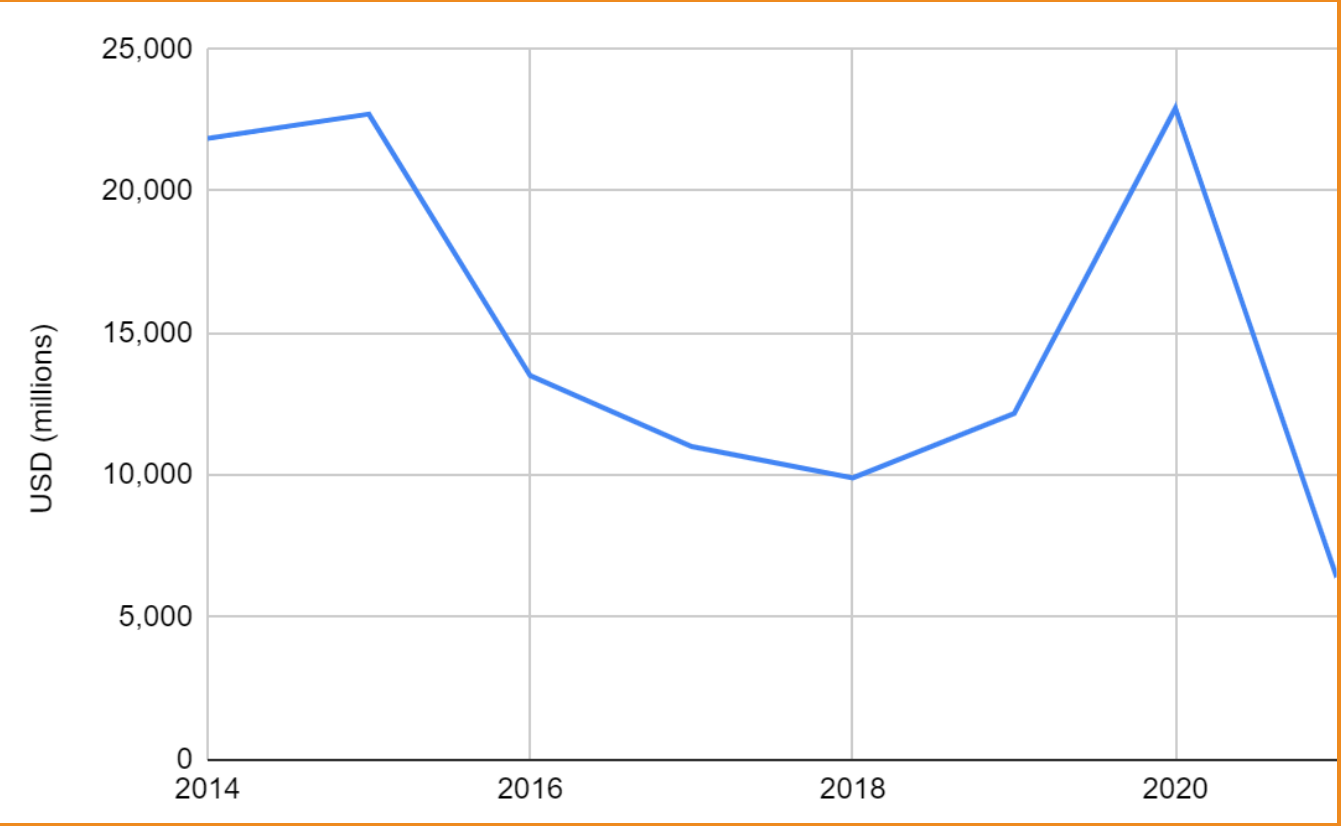


Source: *Calculated by authors from Transition Pathway Initiative data.*[57]

The well-regarded IEA Net Zero by 2050 report points out that global fossil fuel reserves already provide more energy than can be burned on a trajectory to net zero by 2050, and any new investments in oil and gas exploration will result in stranded assets if we want to keep 1.5°C within reach. Unfortunately, our nine companies are among the vast majority of the CA 100+ focus companies that continue spending on exploration and expansion and have not aligned their capital expenditures with the Paris Agreement or with their net zero transition goals.

Additionally, data collected by the Global Oil and Gas Exit List (GOGEL) shows that all of the 10 selected companies are actively developing reserves, and have both short-term and long-term expansion plans. As well, companies have set targets that do not reflect their business practice. Shell set a target of 50% sustainable investments by 2025, but made only 2.7% sustainable investments in 2021. Furthermore, the 10 companies are increasing "unconventional" fossil fuel production, which is generally more emission intensive and environmentally harmful. Currently the 10 companies have 40.3% of their production in unconventional extraction, a number that is likely to increase. Fields that are currently in the two life-cycle stages which precede production rely on more than 60% unconventional techniques. **This is not indicative of a strategy to reduce GHG emissions.**

GRAPH 6. EXPLORATION EXPENSES (9 COMPANIES, IN U.S.D.)



Source: *Calculated by authors from Company 10-K Annual Reports.*[58]

TABLE 2. EXPANSION PLANTS OF THE 10 SELECTED COMPANIES

	SHORT-TERM EXPANSION	
	RESOURCES UNDER DEVELOPMENT/FIELD EVALUATION IN 2021 (mmBOE)	UNCONVENTIONAL EXPANSION (%)
BP p.l.c.	3,189.22	57.26%
Chevron	4,006.25	68.90%
ConocoPhillips	1,906.73	94.74%
Eni SpA	1,893.77	42.08%
Equinor ASA	2,676.68	64.98%
ExxonMobil Corp.	7,387.83	73.01%
Occidental	1,237.2	92.62%
PJSC Gazprom	16,656.0	52.50%
Royal Dutch Shell	3,779.0	40.17%
TotalEnergies SE	4,305.6	32.1%

Source: *Calculated by authors from Global Oil & Gas Exit List 2021 (November 4th, 2021 version).*

Spending on clean energy investments continues to lag spending on perpetuating business as usual. Corporate cash such as Big Oil's recent windfall profits could be used for clean energy investments, to pay higher executive compensation or to pay shareholders through dividends and stock buybacks.

There was a wide range among the four Big Oil emission reductions leaders in the ratio of funds for clean energy investments versus funds for shareholders and executives, with Shell at the bottom with a 0.07 ratio and ENI at the top with a 0.59 ratio.[59]

CONCLUSION

RELYING SOLELY ON ENGAGEMENT IS INSUFFICIENT

Clearly, there are differences of opinion concerning how effective engagement has been, or could be, in changing the behavior of fossil fuel companies.

Some of this difference reflects differences of opinion about, "What is a realistic goal?" Is the goal to stop climate catastrophe by not crossing planetary boundaries that will destabilize the planet, or is it to craft a goal that fossil fuel companies are willing to accept?

The latest IPCC report finds that climate change is outstripping our ability to adapt,[60] so that aiming for a 1.5°C degree target has become even more urgent. The oil and gas industry's current business strategies are likely to raise global temperatures substantially above 2°C. These companies argue that they are producing products that consumers want and that the use of expensive, unproven technologies such as carbon capture and storage can help solve the problem.

But **there's a huge disconnect between the major oil companies' commitments to net zero by 2050 and the lack of impact this pledge appears to have on company strategies or outcomes**.[61] At this point, CalPERS' engagement process seems more responsive to what the fossil fuel industry determines as "realistic goals," regardless of what the science says is required.

This study shows that some of the biggest emitters in CalPERS' portfolio are not reducing emissions sufficiently to align with a 1.5°C or 2°C warming scenario.

CalPERS and the Climate Action 100+ benchmarks bear this out. If emissions reductions, or lowering carbon intensity, or fulfillment of the Climate Action 100+ Net Zero benchmarks serve as good indicators of the effectiveness of CalPERS engagement, then engagement has not been an effective way of influencing these companies. Even more concerning, these companies are not seriously incorporating Scope 3 emissions into their net zero plans, thereby ignoring the vast majority of the emissions that result from their business.

Beyond actual emissions, **the companies are also failing to set interim reduction targets and strategies, as shown by the Climate Action 100+ Net Zero Benchmark.** Five years after its founding, the Climate Action 100+ has only succeeded in getting most of their focus companies to make a "net zero by 2050" pledge. A pledge is not enough.

To make matters worse, these ten companies continue to make capital expenditures in oil and gas exploration. According to the IEA **these investments will inevitably result in stranded assets rather than future revenues** if net zero emissions are to be reached by 2050. If we judge the effectiveness of engagement simply by the extent to which companies are providing reliable estimates of their climate-related risks, then once again, engagement has not resulted in the desired outcome.

The actual process of engagement is not transparent, and goals agreed to by companies in the course of engagements are not made public. Therefore, we cannot state what might transpire when goals are not met. However, we *can* evaluate how CalPERS votes on climate-related shareholder resolutions and on directors, and we have called out a pattern of inconsistencies and continued support for business as usual.

There are a number of factors that might be reducing the effectiveness of CalPERS engagement, starting with the **proxy voting guidelines**. CalPERS proxy voting guidelines are limited in scope. To truly align proxy votes with the Paris Agreement, the guidelines need to be expanded to include matters that are more directly tied to emission reductions, such as emissions reduction targets and strategies. Disclosure alone is not enough. In practice, CalPERS' proxy votes also need to better align with the Climate Action 100+, since voting contrary to the coalition's recommendations (for reasons that are not disclosed) may make the alliance less effective.

CalPERS' engagement practice needs to be expanded to push companies to set specific short-term and medium-term emissions goals and produce audited disclosures of financial risks, and the agreements to do so need to be made public. Engagement must also include known consequences for not meeting these milestones. The consequences should include divestment – selling bonds and equities over a specified time period. **Not meeting specific milestones for having a low-carbon business strategy and reducing emissions indicates that CalPERS should divest.** Stranded assets present a financial risk, and this risk is growing.[62]

To date, shareholder engagement alone has not had the desired effect. In our view, engagement would be more effective with metrics, limits, and consequences. Otherwise, CalPERS will continue to finance expansion through bonds and support business as usual with its investments.

The climate emergency requires that CalPERS use its financial influence to support California climate policies, as the Governor has declared, and not to support oil and gas operations, which are overheating the planet.

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