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ARJUNA
CAPITAL

Shareholder Proposal No. 6 on Chevron Corporation 2018 Proxy Statement:

Report on Low-Carbon Business Model Transition

Chevron Corporation Symbol: CVX

Filed by: As You Sow & Arjuna Capital

We are writing to urge you to **VOTE “YES” ON PROPOSAL 6** on the Chevron proxy, which asks the Company to evaluate adapting its business model for a successful transition to a low carbon economy. The proposal makes the following specific request:

RESOLVED: With board oversight, shareholders request Chevron issue a report (at reasonable cost, omitting proprietary information) describing how the Company could adapt its business model to align with a decarbonizing economy by altering its energy mix to substantially reduce dependence on fossil fuels, including options such as buying, or merging with, companies with assets or technologies in renewable energy, and/or internally expanding its own renewable energy portfolio, as a means to reduce societal greenhouse gas emissions and protect shareholder value.

Rationale for a “YES” vote

The transition to a low carbon energy market is underway. Action to reduce demand for carbon-based energy is accelerating globally and cost-competitive energy sources and transportation modes are quickly challenging the status quo. Shareholders are concerned that Chevron’s current path and mitigation strategies are not congruent with this future. The investor community seeks further commitment from Chevron in curbing its contribution to climate change and ensuring its long-term competitiveness in this new energy economy.

Shareholders should vote “YES” for the proposal for the following reasons:

- 1) **Continuing to invest in high cost, high carbon fossil fuel reserves in the face of disruptive technology development, global climate change, and the Paris Climate Agreement is no longer a prudent path forward for Chevron and its investors.** In an increasingly competitive energy market where low carbon energy sources will be prioritized; our Company must examine a range of alternative strategies for remaining competitive.
- 2) **Business as usual has been an ineffective strategy for Chevron.** Chevron’s historic capital spend on high cost, high carbon assets has eroded profitability and increased Chevron’s risk profile, making the Company increasingly vulnerable to competition from lower cost, lower carbon energy sources. Chevron’s 2016 ROE and ROIC are at near historic lows.
- 3) **Chevron’s profitability remains highly correlated with the profitability of its upstream oil production.** Chevron’s dependency on the price of crude oil makes it vulnerable to a downturn in fossil fuel demand and resulting low oil prices, increasing the company’s risk profile.

- 4) **A variety of feasible options are available to Chevron to compete effectively in an increasingly carbon constrained economy.** Goldman Sachs pegs the low carbon economy at a \$600 billion-plus revenue opportunity, estimating that solar PV and wind will add more to the global energy supply between 2015 and 2020 than shale oil production did between 2010 and 2015. These options should be fully evaluated and disclosed.
- 5) **Chevron has not sufficiently addressed the issues raised in this proposal.** Its current analysis of carbon risk assumes business as usual, despite all indications of a rapidly transforming energy economy.

A former oil company executive recently made the following public statement:

The oil and gas industry and its products account for half of global carbon dioxide emissions.¹ If humanity is to stand any chance of effectively addressing climate change, global oil and gas companies must become part of the solution.²

Shareholders seek assurance that Chevron is taking action to substantially reduce the greenhouse gas emissions associated with its product and that it is planning, and initiating action, to thrive in an energy economy in which greenhouse gas emissions must drop nearly 80% by 2050. To achieve the global Paris goal of maintaining warming substantially below 2 degrees Celsius, a level of warming beyond which catastrophic impacts will occur, fundamental shifts in business planning are necessary.

1) Continuing to invest in high cost fossil fuel reserves in the face of disruptive technology development, global climate change, and the Paris Climate Agreement, is no longer a prudent path forward for Chevron and its investors.

The *Economist* reported in an article entitled “Not-so-Big Oil,” that “the supermajors are being forced to rethink their business model.”³ Shareholders agree. In an increasingly competitive energy market, companies must rethink investments in high cost, high carbon oil assets, which are expensive to develop and must increasingly compete with disruptive low carbon technologies and energy sources.

Carbon-related government policies, which are becoming progressively more stringent, including fuel efficiency requirements, carbon pricing, carbon standards, and technology-oriented directives, can adversely affect demand for oil and gas, speeding the transition to a low carbon economy. The Paris Agreement’s goal of less than 2-degree warming reinforces this transition.

As costs for renewable energy fall and the carbon content of energy takes on increased urgency for producers and consumers, fossil-fuel based energy sources—including natural gas—face competitive risks:

¹ <https://www.cdp.net/en/investor/sector-research/oil-and-gas-report>

² “Former Exxon executive calls on oil industry to clean up its act,” CNBC, May 2018, <https://www.cnbc.com/2018/04/30/oil-industry-needs-to-address-climate-change-says-former-exxon-exec.html>

³ “Not So Big Oil,” Forbes, 2016, <http://www.economist.com/news/business/21698305-supermajors-are-being-forced-rethink-their-business-model-not-so-big-oil?fsrc=rss>

"Given the installed costs and the performance of today's renewable technologies, and the costs of conventional technologies, the fact is this: renewable power generation is increasingly competing head-to-head with fossil fuels, without financial support..."⁴

Research group Wood MacKenzie reports that slowing demand for oil and forecasts of rapid growth in renewables pose both a threat and an opportunity that large oil companies cannot ignore.⁵ Even natural gas is at risk. MIT's Energy Collective notes that natural gas now provides only a "short and narrow bridge" to a low carbon future.⁶

Costs for electric vehicles and battery storage technology are also declining rapidly. In October 2016, Fitch Ratings predicted that electric cars will be a "resoundingly negative" threat to the oil industry and urged energy companies to plan for "radical change."⁷ Morgan Stanley recently found that shrinking battery costs, lower charging times, and increasing driving ranges mean EVs could account for an estimated 48% of all miles traveled by 2040.⁸

The pace of renewable energy adoption has historically beat government and company projections by significant percentages. When companies rely substantially on such conservative projections, the potential for stranding of long-lived assets increases. Citibank estimates that unburnable fossil fuel reserves could amount to over \$100 trillion in stranded assets out to 2050 if the global community meets its Paris commitments.⁹

On the other hand, the Carbon Tracker Initiative estimates that the oil majors' combined upstream assets would be worth **\$140 billion more** if they choose to undertake projects on the low end of the cost curve that are consistent with a 2-degree demand level.¹⁰ Significantly, even if the price of oil were to rise to just below \$120/bbl (a scenario that remains unlikely), investments in 2-degree compliant projects would still render upstream assets worth more than under a business as usual approach.¹¹

2) Historic levels of capital spend on high cost, high carbon assets has eroded profitability and increased Chevron's risk profile. Business as usual high growth planning has been an ineffective strategy for Chevron.

⁴ "Renewable Energy's Increasingly Competitive Credentials," HSBC Newsletter (April, 2017) <http://www.gbm.hsbc.com/solutions/sustainable-financing/edition4-newsletter-april-2017/renewable-energys-increasingly-competitive-credentials> (citing U.N. Chronicle 2015, <https://unchronicle.un.org/article/how-renewable-energy-can-be-cost-competitive>).

⁵ "Oil giants need to invest heavily in renewables by 2035, says analysis; Slowing demand for oil and forecasts of rapid growth in green power pose risk to core business, says analyst," <https://www.theguardian.com/environment/2017/jun/12/oil-giants-need-to-invest-heavily-in-renewables-by-2035-analysis-finds>

⁶ "Natural Gas Provides Only a 'Short and Narrow' Bridge to the Future," The Energy Collective, MIT, Nov. 2017, <http://www.theenergycollective.com/energyatmit/2415970/natural-gas-provides-short-narrow-bridge-low-carbon-future>.

⁵ "Electric Cars Pose 'Resoundingly Negative' Threat to Oil Majors – Report," Pilita Clark, *Financial Times*, (Oct. 2016), <https://www.ft.com/content/8fcb287c-498e-32ed-b673-bda6f4169d11>.

⁸ "Electric Vehicles Bring Disruption to the Pump," April 2018, <https://www.morganstanley.com/ideas/electric-vehicle-disruption>

⁹ "Energy Darwinism," Citibank, August 2015

¹⁰ "Sense and Sensitivity: Maximising Value with a 2D Portfolio," <http://www.carbontracker.org/report/fossil-fuels-stress-test-paris-agreement-managed-decline/>; see also "Engaging for a Low Carbon Transition, Why a 2C Business Model is Less Risky Than 'Business-As-Usual' for Oil Companies," Local Authority Pension Fund Forum, Carbon Tracker, 2016, <http://www.lapfforum.org/engaging-for-a-low-carbon-transition-new-report-published-by-lapff-and-carbon-tracker-initiative/>

¹¹ *Id.*

Chevron's historic capital spend on high cost, high carbon assets has eroded profitability and increased Chevron's risk profile, making the company vulnerable to downturns in fossil fuel demand and low oil prices. Chevron is only now coming off historic lows in its ROE and ROIC. From 2005 to 2016, Chevron's capital expenditures more than doubled. This precipitous rise in spend on high cost, high carbon projects contributed to a -143% drop (2006-2016) in Chevron's operating profit margins. Significantly, ROIC for the majors was cut in half even *before* the oil price decline, as noted in the *Financial Times*:

The average return on capital of the largest European and US oil companies dropped from 21 per cent in 2000 to 11 per cent in 2013, *even though the average price of benchmark Brent crude rose* from \$29 to \$109 in the same period... Even when crude was at those higher levels the financial performance of the large international oil companies was unimpressive.¹²
(emphasis added)

Chevron's current low ROIC (which measures how efficient a company is at earning cash flow from investment) remains historically low. This trend will only be exacerbated by declining demand for fossil-fuel based energy. The IEA 450 (2° Celsius) scenario predicts that oil and gas demand will decrease 30% by 2040, with demand beginning to decline after 2020. Given that lead times for oil and gas projects are often five to ten years, it is important that Chevron not only avoid significant new investments in high carbon assets including tar sands, but also avoids high cost and long term projects including Arctic and many deep water projects. Such disciplined investment will reduce risk, volatility, and the increasing prospect of stranded assets, while ensuring that the Company's investments are profitable even in a low price environment.¹³

3) Chevron's profitability is highly dependent on its upstream oil production component.

Chevron's dependency on the price of crude oil makes it vulnerable to a downturn in fossil fuel demand and low oil prices, increasing the company's risk profile. In its most recent annual report, the company reports a total loss of \$2.5 billion for its US upstream operations.¹⁴ The company attributes the losses to the price of crude oil, which it expects to rise as supply of the commodity decreases and demand increases.¹⁵ Although demand is difficult to predict, the global trends are moving quickly toward fossil fuel reduction and low carbon energy adoption, despite continued global economic growth. There are few indications that these trends will decelerate in the future.

While additional energy is necessary to support growth in developing economies, many countries are demonstrating an increasing preference for cleaner, cheaper alternatives energy sources and technologies.¹⁶ Chevron references alternative energy in its opposition statement, but has yet to make

¹² "Oil companies seek lasting cost cuts after crude price plunge," Ed Crook, *Financial Times* (April 2017), <https://www.ft.com/content/1e4570d0-ea5d-11e4-96ec-00144feab7de>

¹³ See "Engaging for a Low Carbon Transition, Why a 2C Business Model is Less Risky Than 'Business-As-Usual' for Oil Companies," Local Authority Pension Fund Forum, Carbon Tracker, 2016, <http://www.lapfforum.org/engaging-for-a-low-carbon-transition-new-report-published-by-lapff-and-carbon-tracker-initiative/> for a discussion of the benefits to companies and shareholders of adopting a low carbon business model.

¹⁴ <https://www.chevron.com/-/media/chevron/annual-report/2017/2017-Annual-Report.pdf>, p. 17

¹⁵ <https://www.chevron.com/-/media/chevron/annual-report/2017/2017-Annual-Report.pdf>, p. 12

¹⁶ Globally, governments are adopting more stringent fuel economy policies and promoting low carbon vehicle technology standards. China will require 40 percent of cars sold by 2030 to be electric and has stated an intent to ban vehicles with internal

substantial investments in this arena to reduce the Company's dependence on oil sales and high oil prices. Moving now to reduce, or diversify from, a single focus on carbon based energy can decrease risk for investors and the Company.

4) A variety of feasible options are available to Chevron to compete effectively in an increasingly carbon constrained world. These options should be fully evaluated and disclosed.

Goldman Sachs pegs the low carbon economy at a \$600 billion-plus revenue opportunity, estimating that solar PV and wind will add more to the global energy supply between 2015 and 2020 than shale oil production did between 2010 and 2015.

Investors ask that Chevron analyze the feasibility of a range of options designed to help the company remain competitive, viable, and able to transition its business successfully in an increasingly low carbon economy. Despite Chevron's optimistic assumption that creating efficiencies will prove sufficient, shareholders ask Chevron to develop a plan outlining options for more fundamental changes and report to shareholders on a range of responsive actions. Such options, for instance, might include an analysis of diversifying its energy portfolio beyond oil and gas including reinvesting in higher growth and more competitive alternative energy sources or developing internal capacity. Competitor companies such as Total S.A., Statoil, and Shell have already begun to diversify, investing in solar companies and other renewable energy sources. Buying or investing in low carbon, renewable energy, not only provides the benefit of diversification, but also provides new jobs and stimulus to local economies. In Chevron's opposition statement, the Company itself appears to agree that energy from diverse sources will be needed to meet the growing demand for energy, yet downplays the need to move away from its current product mix.

Chevron should also evaluate the potential of shrinking the company's carbon-based assets, undertaking an M&A approach, or returning more capital to shareholders.

5) The Company's Opposition Statement: Chevron has not sufficiently addressed the issues raised in this proposal. Its current analysis is not adequately forward-looking and fails to address a sufficient range of options on how to significantly reduce dependence on fossil fuels.

Chevron argues that the requested report is unnecessary in light of the safeguards and oversight in place through Chevron's strategy, planning, and risk management processes and has considered portfolio and investment options that enhance our competitive position.

While most companies have risk management processes in place, this Proposal asks the Company to undertake an evaluation that goes beyond standard risk management practices to plan for how the business can operate successfully under dramatically changed circumstances. *The Company has not yet undertaken this reporting.* While Chevron's most recent report references the IEA's Sustainable Development Model, the Company has not developed business planning that significantly reduces

combustion engines (ICE). India plans that 30% of vehicles on its roads will be electric by 2030. Other countries and cities have announced measures to ban ICE engines. For example, Austria and Germany will ban petrol and diesel ICE vehicles for new sales beginning in 2030 and the U.K. and France by 2040. California recently announced an Executive Order to increase the State's goal of 1.5 million zero emission vehicles (ZEV) on the road by 2025 to 5 million by 2030.

dependence on fossil fuels in line with this scenario, instead projecting that demand will continue to grow, albeit more slowly.

According to the Company's "climate change resilience: a framework for decision making" report, the Company's growth planning is in alignment with the IEA's New Policies Scenario (NPS).¹⁷ The NPS is essentially a business as usual model, assuming only that carbon policies already in place and those that have been announced will be enacted—fossil fuel demand and carbon emissions continue to grow over time under this scenario. The NPS model is associated with an approximately 2.7 degree or higher level of global warming.¹⁸

Since the pace and destruction of climate change is increasingly recognized at temperatures below 2 degrees, while alternative energy sources and technologies are rapidly becoming more cost competitive and accessible, assuming the status quo will continue into the future is irresponsible. Planning in line with the NPS model undermines the world's ability to keep global temperatures from rising above 2°C, increases risk to the Company as the world economy decarbonizes, and increases the Company's vulnerability to lower oil prices, whether from declining demand or oversupply.

As noted, the long-term decline of the Company's financial fundamentals is associated with its current growth model planning. Even at oil prices above \$100/barrel oil, this model has struggled. In a global economy ratcheting back on carbon emissions, a carbon-based growth model is even less sound.

Chevron argues that a decrease in overall fossil fuel emissions is not inconsistent with continued or increased fossil fuel production by the most efficient producers. Focusing strictly on efficiency is insufficient to ensure our Company thrives in a carbon-constrained market. Approximately three quarters of emissions from oil are associated with use of the product with the remainder from the operations necessary to produce it.¹⁹ Simply becoming more efficient cannot address the bulk of the carbon embedded in the product. In addition, most oil and gas producers will be focused on efficiency. Therefore, competitive advantage through this method is not assured. Simultaneously, the Company fails to sufficiently consider threats from increasingly competitive low carbon technologies and government standards to enforce carbon reductions.

Conclusion

Every oil and gas company, including Chevron, must begin planning a way forward in this new energy economy. A failure to do so signals to investors that our company is not adequately prepared for a rapidly changing energy market. We agree that there are a range of oil and gas projects appropriate and profitable under a 2-degree scenario. We ask that the company fully analyze how it could operate profitably under such a scenario, seeking out the range and feasibility of options available for shedding

¹⁷ "climate change resilience: a framework for decision making", Chevron, 2018, <https://www.chevron.com/-/media/shared-media/documents/climate-change-resilience.pdf>.

¹⁸ <https://www.iea.org/weo2017/>

¹⁹ See e.g., "Low Carbon Fuel Standard Lookup Table Pathways, Draft", California Air Resources Board, 2017, https://www.arb.ca.gov/fuels/lcfs/lcfs_meetings/110617lookuptable.pdf, p.36; "Assessment of Direct and Indirect GHG Emissions Associate with Petroleum Fuels," Life Cycle Associates, LLC (2009). http://www.newfuelsalliance.org/NFA_Plmpacts_v35.pdf, p. v.

its highest cost and highest carbon-risk assets, and reinvesting in cleaner energy, diversified enterprises, or returning capital to shareholders. Implementing this Proposal is a prudent path forward for the Company and is in the best interest of shareholders.

The Proponents urge shareholders to vote for Item number 6 following the instruction provided on management's proxy mailing.

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