



Chevron Corporation
Vote Yes: Disclosures on Carbon Asset Transition
Annual Meeting: May 25, 2016
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SUMMARY

This resolution seeks to provide a pathway for Chevron to succeed in an increasingly carbon-constrained economy. The resolution requests the Company to report its energy reserves in British Thermal Units (BTUs), an internationally recognized, source-neutral metric of energy, in addition to the carbon-based “barrels of oil equivalent” and “cubic feet of gas” in which the Company currently reports. Global energy markets are undergoing a structural shift toward less polluting, low carbon energy sources. Reporting in energy-neutral metrics will help Chevron respond to climate change imperatives by allowing the Company, and the market, to account for and value all energy resources the Company develops, including solar, wind, cellulosic biofuels, geothermal, and other renewables.

Currently, oil and gas companies are valued on whether carbon-based oil and gas reserves are replaced annually. Chevron’s stock market value may be impaired if 100% oil and gas replacement is not fully achieved each year. Under this traditional reporting and reserve valuation system, Chevron is incentivized to prioritize investments in oil and gas resources and is disincentivized to pursue renewable energy resources.

Reporting in the source-neutral energy metric of BTUs will provide shareholders and markets with comparable and assessable information about the Company’s full range of energy assets, including energy resources other than oil and gas. Further, it will give management more freedom to create profitable and sustainable business models, mitigate risks posed by climate change-induced markets, and serve the best interest of shareholders. We urge you to vote “yes” for this resolution.

RESOLVE CLAUSE

Proponents request that, by February 2017 and annually thereafter in a publication such as the annual or CSR report, Chevron quantify and report to shareholders its reserve replacements in BTUs, by resource category, to assist the Company in responding appropriately to climate change induced market changes. Such reporting shall be in addition to reserve reporting required by the Securities and Exchange Commission, and should encompass all energy resources produced by the Company.



RATIONALE FOR A YES VOTE

- 1) **Changing market dynamics and regulations are escalating Chevron's carbon asset risk, which can be reduced by diversifying the Company's energy resources.** Fundamental shifts occurring today in energy markets, such as the rapid growth of renewable energy, and the advancement of competing technologies such as electric vehicles, have the potential to substantially reduce demand for Chevron's oil and gas products. In addition, climate change regulations and air quality standards are steadily increasing the regulatory risks facing Chevron's carbon-intensive assets. These market forces are creating pressure for Chevron to diversify its energy resources to manage and reduce risk.
- 2) **Oil and gas companies are incentivized by current reporting metrics to continue to produce carbon-based energy.** Chevron currently reports its annual reserve replacement of oil and gas resources, and does so in the carbon-based metric of "barrels of oil equivalent" and "cubic feet of gas." So long as these are the only reported metrics, the shareholders and the market will continue to value only these resources, creating pressure to replace 100% of oil and gas reserves, discouraging a transition to low carbon energy sources. Maintaining this limited suite of reporting metrics presents growing risk to shareholders as Chevron is incentivized to pursue oil and gas resources at any cost and disincentivized to pursue low-carbon business opportunities.
- 3) **Reporting reserves, by resource, and across all energy types will allow greater flexibility for Chevron to pursue diversified business models.** The disclosure requested in this proposal -- reporting energy resources by resource category, in BTUs -- will allow greater flexibility for Company management to pursue resource diversification by allowing all energy types to be accounted for and valued by markets and investors. This reporting metric will support Chevron in decoupling its business solely from oil and gas, and allow an impartial market evaluation of all resources Chevron produces as it transitions away from carbon assets.
- 4) **The reporting requested in this proposal provides a simple and assessable metric for markets and investors to evaluate Chevron's energy reserves.** Chevron, and the oil and gas industry broadly, lack transparency in providing information by which shareholders and the market can evaluate non carbon-based energy resources comparably to oil and gas. Reporting reserves across all of a Company's energy resources, in source neutral BTUs, provides an easy-to-implement and assessable standard providing this critical information.

1. **Changing market dynamics and regulations are escalating chevron's carbon asset risk, which can be reduced by diversifying the company's energy resources.**

Investors understand that in a rapidly decarbonizing economy, fossil fuel companies must develop climate change-responsive business models that mitigate the risks of disruptive low carbon technologies, greenhouse gas regulations, and associated falling demand. One possible path for oil and gas companies to respond to climate change is to transition into energy companies not wholly dependent on carbon intense, climate damaging commodities. Establishing a climate-friendly measure of energy reserves is a key step in incentivizing management, and the market, to more easily value all of the Company's energy resources, helping it remain competitive in the transition to a clean energy economy.



Falling Demand for Oil and Gas – Worldwide demand for fossil fuels is being affected by policies and technology trends related to climate change, including: increased fuel efficiency, use of lower-carbon fuels, electrification of ground transportation, and rapidly declining costs of renewable energy, among others.¹ In developed nations, demand for oil has *fallen* since 2005, primarily as a result of more efficient vehicles.² A March 2013 Citi report cites a number of trends indicating that “oil demand [growth] is approaching a tipping point” and that a leveling off in demand may occur by 2020.³ The IEA and Deutsche Bank forecast global oil demand could peak in the next ten to fifteen years.⁴ Peaking demand, and the resulting impacts to commodity prices, poses risks that many of Chevron’s oil and gas reserves may never be developed and that continued large investments in high-cost replacements may become stranded. In contrast, renewable energy markets will continue to grow as costs decline and carbon-related pressures increase⁵.

Competition from Disruptive Technologies - Competition from carbon-free, renewable substitutes are threatening Chevron’s natural gas business. Low carbon solutions have been adopted at a higher rate than most analysts predicted, and costs for low carbon and renewable infrastructure have declined faster than anticipated. Demonstrating these trends, in 2013, the world added more capacity for carbon-free electric power than coal, natural gas, and oil combined.⁶ Deutsche Bank predicts that solar power systems will be at grid parity in up to 80 per cent of global markets by 2017.⁷ As prices of renewable energy become equal to or less than fossil fuels, an aggressive shift to these forms of energy is likely to occur. Renewable energy offers benefits that oil and gas do not, including low and predictable fuel and power costs; ease of scalability and distribution; reduced regulatory risk; reduced carbon asset risk; increased safety of operations; improved branding and reputation; and environmental and public health benefits. Similarly, electric vehicles (EVs) are a disruptive technology that can reduce oil demand. From 2011 to 2014, global EV stock has more than tripled, and annual sales have increased over six fold.⁸ All major automobile industry leaders now offer electric vehicles, including Ford, GM, Nissan, BMW, KIA, and Toyota.⁹ Battery cost, which is a large factor in total EV cost, is also falling rapidly. From 2007 to

¹ “IEA cuts 2015 oil demand outlook despite plunging prices,” *Business Insider*, Dec 12, 2014.

<http://www.businessinsider.com/afp-iea-cuts-2015-oil-demand-outlook-despite-plunging-prices-2014-12>

² “Yesterday’s fuel: The world’s thirst for oil could be nearing a peak. That is bad news for producers, excellent for everyone else,” *The Economist*, Aug 3, 2013, <http://www.economist.com/news/leaders/21582516-worlds-thirst-oil-could-be-nearing-peak-bad-news-producers-excellent>

³ Paul Tullis, “Peak Oil’ Is Back, but This Time It’s a Peak in Demand.” *Bloomberg*, May 3, 2013,

<http://www.bloomberg.com/bw/articles/2013-05-01/peak-oil-is-back-but-this-time-its-a-peak-in-demand>

⁴ Liam Denning, “Oil’s Black Swans on the Horizon,” *Wall Street Journal*, Feb 16, 2015, <http://www.wsj.com/articles/oils-black-swans-on-the-horizon-1424108038>

⁵ International Energy Agency. “Renewables to lead world power market growth to 2020”. October 2nd, 2015.

<https://www.iea.org/newsroomandevents/pressreleases/2015/october/renewables-to-lead-world-power-market-growth-to-2020.html>

⁶ Tom Randall. “Fossil Fuels Just Lost the Race Against Renewables,” *Bloomberg*, April 14, 2015,

<http://www.bloomberg.com/news/articles/2015-04-14/fossil-fuels-just-lost-the-race-against-renewables>

⁷ Giles Parkinson. “Deutsche Bank Predicts Solar Grid Parity In 80% Of Global Market By 2017,” *Clean Technica*, January 14, 2015, <http://cleantechnica.com/2015/01/14/deutsche-bank-predicts-solar-grid-parity-80-global-market-2017/> See also; Vishal Shah, “Markets Research: Industry Solar: 2015 Outlook.” *Deutsche Bank*. January 8, 2015, 22.

[http://www.qualenergia.it/sites/default/files/articolo-doc/Solar%202015%20Outlook\(1\).pdf](http://www.qualenergia.it/sites/default/files/articolo-doc/Solar%202015%20Outlook(1).pdf)

⁸ Clean Energy Ministerial. “EVI Releases the Global EV Outlook 2015.” <http://www.cleanenergyministerial.org/News/evi-releases-the-global-ev-outlook-2015-27091>

⁹ Eric Schaal, “10 Car Companies That Sell the Most Electric Vehicles.” September 16, 2015,

<http://www.cheatsheet.com/automobiles/10-car-companies-that-sell-the-most-electric-vehicles.html/?a=viewall>; Michael

2014, industry-wide battery prices fell by 59%, and are expected to fall another 63% by 2020.¹⁰ Dropping battery prices enable customers to more easily move away from the electric grid to solar with battery storage, reducing natural gas use. Together, these disruptive technologies can substantially reduce demand for oil and gas.

Regulatory risks are intensifying as global governments take action on climate change - The International Energy Agency, in its 2012 World Energy Outlook, recognized that no more than one-third of proven reserves of fossil fuels can be consumed prior to 2050 if the world is to have a chance at limiting global warming to 2 degree Celsius, the level beyond which severe consequences occur for economies, market participants, and the environment. As noted by Mark Carney, the President of the Bank of England, the carbon budget associated with meeting the 2 degree goal will “render the vast majority of reserves ‘stranded’ – oil, gas, and coal that will be literally unburnable without expensive carbon capture technology, which itself alters fossil fuel economics.”¹¹ In the 2 degree scenario, 35% of oil reserves are expected to remain unburned and Barclays estimates that *the oil industry is posed to lose \$22.4 trillion in revenues*, underscoring the importance of Chevron taking transparent action to diversify its portfolio and mitigate its share of these losses.¹²

Climate change regulatory risk has been magnified by the 21st Session of the Conference of the Parties (COP 21) in Paris, where 195 global governments agreed to restrict greenhouse gas emissions to less than 2 degrees Celsius from pre-industrial levels and submitted plans to begin achieving the necessary greenhouse gas emission reductions. Achievement of a 2 degree goal requires *net zero global emissions* to be attained by 2100, a goal agreed upon in the Paris Accord.¹³

The Paris agreement and other laws and regulations adopted to limit carbon emissions will have the effect of reducing fossil fuel use, supporting the need for oil and gas companies to begin diversifying their energy base.

Increasing Costs and Decreasing Profitability – The increasing cost for Chevron to find, produce, and develop new oil and gas resources only heightens the increasing risk associated with Chevron’s oil and gas assets. As conventional crude oil sources become increasingly hard to find, companies such as Chevron are having to pursue “unconventional” resources that are more costly to extract due to

Coates, “Top 10 Electric Cars”. Clean Fleet Report, September 7, 2015, <http://www.cleanfleetreport.com/top-electric-cars-2010/> [Although Toyota has been a leader in the development of hybrid electric vehicles, and has a plug-in hybrid and an electric vehicle on the market, it is putting more development funds into hydrogen vehicles, which it perceives as the technology most likely to succeed]. Toyota. <https://ssl.toyota.com/mirai/#>

¹⁰ Nature Climate Change. Rapidly falling costs of battery packs for electric vehicles. Oct, 2014.

<http://www.nature.com/nclimate/journal/v5/n4/full/nclimate2564.html> ; IRENA, “Battery Storage for Renewables: Market Status and Technology Outlook,” 2015.

http://www.irena.org/documentdownloads/publications/irena_battery_storage_report_2015.pdf Pg 30

¹¹ Bank of England. Breaking the tragedy of the horizon - climate change and financial stability - speech by Mark Carney. Sept, 2015. <http://www.bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx#1>

¹² Leslie Hayward, “Barclays: \$22 Trillion In Oil Revenue At Risk From COP-21 Negotiations” *The Fuse*, Dec 10, 2015.

<http://www.energyfuse.org/barclays-22-trillion-in-oil-revenue-at-risk-from-cop-21-negotiations/>; Roz Pidcock, “Meeting two degree climate target means 80 per cent of world’s coal is “unburnable”, study says,” *Carbon Brief*, January 1, 2015.

<http://www.carbonbrief.org/meeting-two-degree-climate-target-means-80-per-cent-of-worlds-coal-is-unburnable-study-says>.

¹³ United Nations Environmental Program. UN Says Global Carbon Neutrality Should be Reached by Second Half of Century, Demonstrates Pathways to Stay Under 2°C. Nov, 2014.

extreme and remote locations and a range of technological challenges.¹⁴ Oil and gas companies' capital expenditure budgets are increasing dramatically while oil and gas resources and revenues remain static or, in some cases, are decreasing. .Kepler Cheuvreux has declared this trend a "capex crisis."¹⁵

To give a scale of increasing costs, from 2000 to 2014 Chevron's capital expenditures grew 364%, while production *decreased* 6%.¹⁶ Increasing oil and gas production costs are also linked to decreasing profitability and higher competition risks. Even with oil prices above \$100/barrel from 2011 to 2013, Chevron's net income dropped 20%.¹⁷ Chevron has since cut costs and reduced its capital expenditures due to the mid-2014 oil price collapse, but these actions do not appear to be sufficient to stem the crisis. Chevron has a portfolio that is increasingly built on high cost oil projects, which has not fared well amidst low oil prices. Chevron reported a 76% lower net income in 2015 compared to 2014.¹⁸ Chevron's stock price is also affected by low oil prices -- from June 2014 to April 2016, Chevron stock fell 23%.¹⁹ These pressures put the viability of Chevron's high-cost, high carbon oil and gas resources into question as demand slows or decreases due to carbon reduction pressures and new technologies. This is especially true where low-cost producing nations, such as Saudi Arabia, Iran, and Iraq, can continue flooding the market for decades. It is unclear how long Chevron can compete with low-cost producing nations in a decarbonizing economy.

2. Oil and gas companies are incentivized by current reporting metrics to continue to produce carbon based energy.

The current system of accounting for reserves impedes management's ability to diversify into resources beyond oil and gas -- a critical component of establishing sustainable business models within climate-constrained energy markets. Currently, reserves are only denominated in oil and gas units. These oil and gas reserve metrics are closely tracked by analysts and can influence Company market valuation. For example, when Exxon did not achieve 100% reserve replacement in 2016 for the first time in 22 years, it created significant coverage and concern across the oil and financial industries -- reflecting its importance to investors.²⁰ To avoid the consequences of failing to meet expected oil and gas reserve replacement -- including a lack of investor confidence and impact to stock price -- management is often

¹⁴ Jorge Leis, John McCreery and Juan Carlos Gay, "National oil companies reshape the playing field," *Bain and Company* Oct 10, 2012. <http://www.bain.com/publications/articles/national-oil-companies-reshape-the-playing-field.aspx>; Christopher Click and Douwe Tideman. "Rediscovering the Art of Exploration," *Pricewaterhouse Cooper*, 2013,

http://www.strategyand.pwc.com/media/file/Strategyand_Rediscovering-the-Art-of-Exploration.pdf

¹⁵ Mark C. Lewis, "Toil for Oil Spells Danger for Majors." *Kepler Cheuvreux. ESG Research*, September 15, 2014, 66,

http://www.qualenergia.it/sites/default/files/articolo-doc/KC-ESG_Toil%20for%20Oil-1.pdf

¹⁶ "Chevron Corp: Financials." *Y-Charts*, Accessed April 12, 2016, <https://ycharts.com/companies/CVX> ; Chevron. *Annual Report 2014 & 2004*. Accessed April 12, 2016, <http://www.chevron.com/investors/financial-information#secfilings>

¹⁷ "Chevron Corp: Financials." *Morningstar*, Accessed April 12, 2016. http://financials.morningstar.com/income-statement/is.html?t=CVX®ion=USA&culture=en_US

¹⁸ "Chevron Corp: Financials." *Morningstar*, Accessed April 12, 2016. http://financials.morningstar.com/income-statement/is.html?t=CVX®ion=USA&culture=en_US

¹⁹ Google Finance. *Chevron Corporation*. Accessed April 12, 2016. <https://www.google.com/finance?q=NYSE:CVX>

²⁰ Bradley Olson, "Exxon Fails to Replace Oil, Gas Production for First Time in 22 Years", *The Wall Street Journal*, February 21, 2016, <http://www.wsj.com/articles/exxon-fails-to-replace-oil-gas-production-for-first-time-in-22-years-1455926914>; Joe

Carroll, "Exxon Fails to Replace Production for First Time in 22 Years", *Bloomberg*, February 19, 2016, <http://www.bloomberg.com/news/articles/2016-02-19/exxon-fails-to-replace-production-for-first-time-in-22-years>



fully focused on oil and gas investment rather than diversification to address changing energy market trends.

Companies are also incentivized to replace oil and gas reserves to reach corporate goals and metrics outlined in their executive incentive packages. For example, as stated in Chevron's 2016 Proxy statement, "reserves" are one of the key measures in determining "Operating Performance", which constitutes 25% of the corporate performance rating and impacts compensation packages.²¹ Reporting on the Company's oil and gas reserve replacement ratio, and the fact that Chevron replaced 113% of its reserves over the last 5 years, was also included as one of the operational performance highlights in the Company's proxy statement.²² The current fuel-specific reporting metric clearly incentivizes the production and development of new oil and gas reserves, leaving little room for management to invest in, and account for, low carbon energy resources.

3. Reporting reserves in BTU's by resource and across all energy types will allow greater flexibility for Chevron to pursue diversified business models.

Company management should have maximum flexibility to optimize production and development of energy reserves in line with changing market conditions and opportunities. The current system of oil and gas reserve replacement accounting limits such flexibility and creates inappropriate incentives. Reporting reserves of all resource types in energy-neutral BTU units will give management more recognition for, and therefore more latitude in, pursuing non-carbon investments, allowing diversification to begin in response to climate constrained markets if management believes this is an appropriate course of action. Reporting in BTUS, in addition to barrels of oil and cubic feet of gas, will reduce focus on the need to replace 100% of oil and gas reserves, highlighting the addition of other saleable energy reserves. This additional reporting standard will also help foster more thorough assessments by investors, creditors, and analysts, thus improving corporate evaluations in a de-carbonizing economy.

4. The reporting requested in this proposal provides a simple and assessable metric for markets and investors to evaluate Chevron's energy reserves

Reporting reserves by resource type, in BTU energy units, would be a simple undertaking for Chevron to complete and would provide useful information to shareholders and analysts. Converting energy resources into BTU units is well established and defined by agencies such as the Energy Information Administration; it is also a conversion that is consistently done by oil companies in their internal operations.²³

²¹ Chevron, *2016 Proxy Statement*, March, 2016, pg 38. <https://www.chevron.com/-/media/chevron/shared/documents/chevron-proxy-statement-2016.pdf>

²² Chevron, *2016 Proxy Statement*, March, 2016, pg 39. <https://www.chevron.com/-/media/chevron/shared/documents/chevron-proxy-statement-2016.pdf>

²³ See, e.g. *Energy Information Administration*, "Energy Units and Calculator Explained: British Thermal Units (BTU)", Updated December 15, 2016, http://www.eia.gov/Energyexplained/?page=about_btu & *Energy Information Administration*, "Annual Energy Outlook 2015: Appendix G: Conversion Factors", 2015, <https://www.eia.gov/forecasts/aeo/pdf/appg.pdf>; Chevron also uses BTUs in reporting, See, e.g. Chevron, *Additional Information on Chevron's Greenhouse Gas Management Activities*, May 2015, https://www.chevron.com/-/media/chevron/shared/documents/GHG_Management.pdf



Chevron argues that its current “reserve reporting is in accordance with the U.S. SEC rules and to report in non-standard units that are other than as prescribed risk fostering confusion” As stated in our resolution, it is requested that “such reporting be in *addition* to reserve reporting required by the Securities and Exchange Commission”, specifically so as to not infringe on disclosures requested by the SEC.²⁴ Further, contrary to fostering confusion, reporting energy resources by BTUs, by energy category, will create an accessible metric for comparability across all resource types, allowing investors and markets the ability to analyze fossil fuels and renewables side by side. Currently, there exists no such comparable data. Further, this argument gives shareholders and analysts little credit; they in fact are not likely to be confused by Chevron adding a BTU category to its existing reporting. The reporting of reserves in BTUs, in addition to oil and gas metrics, will increase management’s flexibility in pursuing profitable business models and increase information for shareholders and market analysts.

GLOBAL INVESTOR CONCERN

An important impetus driving this resolution is global investor concern about the growing risks associated with oil and gas companies’ continuing investment in high cost, high carbon assets, as well as the need for better information for shareholders to adequately evaluate risks and opportunities in a de-carbonizing economy. Risks associated with high carbon assets have been acknowledged by reputable financial institutions across the world, including the Bank of England, Blackrock, and multiple governments.²⁵ Additionally, the Global Investor Coalition, a group of investors representing over \$23 trillion in assets worldwide has made carbon disclosure requests to dozens of companies in the oil and gas section.²⁶ The Financial Accounting Standards Board (FASB) has also recently developed a Task Force on Climate-Related Financial Disclosures (TCFD), under the chairmanship of Michael Bloomberg, to create a set of voluntary disclosure mechanisms providing critical information to investors, lenders, insurers, and other stakeholders. The reporting requested by this resolution would provide investors with such critical information, provide a means for Chevron to transition to a diversified business model, and would reduce risks associated with climate change.

CONCLUSION

There is a clear need for practices to reduce risk associated with climate change and to provide mechanisms to facilitate a transition to low-carbon business models. The disclosures requested in this resolution -- to report reserves in BTUS, by resource category -- provides a clear and simple method to

²⁴ Chevron, *2016 Proxy Statement*, March, 2016, pg 72. <https://www.chevron.com/-/media/chevron/shared/documents/chevron-proxy-statement-2016.pdf>

²⁵ Bank of England. One Bank Research Agenda. February, 2015.

<http://www.bankofengland.co.uk/research/documents/onebank/discussion.pdf>; BlackRock. The Price of Climate Change: Global Warming’s Impact on Portfolios. Oct, 2015. <https://www.environmental-finance.com/assets/files/The%20Price%20of%20Climate%20Change%20-%20BlackRock.pdf>; Pensions & Investments. France to require institutional investors to disclose carbon exposure. May, 2015.

<http://www.pionline.com/article/20150522/ONLINE/150529958/france-to-require-institutional-investors-to-disclose-carbon-exposure>; The Greens. Greens Senate Inquiry into the Exposure of Australian’ Investment to the Carbon Bubble. February, 2016. <http://greens.org.au/news/qld/greens-senate-inquiry-exposure-australians%E2%80%99-investments-carbon-bubble>

²⁶ Investor Network o Climate Risk. Investor Expectations: Oil and Gas Company Strategy: Supporting investor engagement on carbon asset risk. www.iigcc.org/files/publication-files/2014_Investor_Expectations_Oil_and_Gas_Company_Strategy.pdf



AS YOU SOW

2016 Proxy Memo

Chevron

Request: Disclosures on Carbon Asset Transition

comparatively account for all energy assets and provides an alternative to current reporting metrics that disincentive the pursuit of diversified energy resources. The disclosure request is clear, easy for the Company to implement, and provides benefits to shareholders. We urge you to vote “yes” for this resolution.