

PRESS RELEASE – 11 JULY 2017

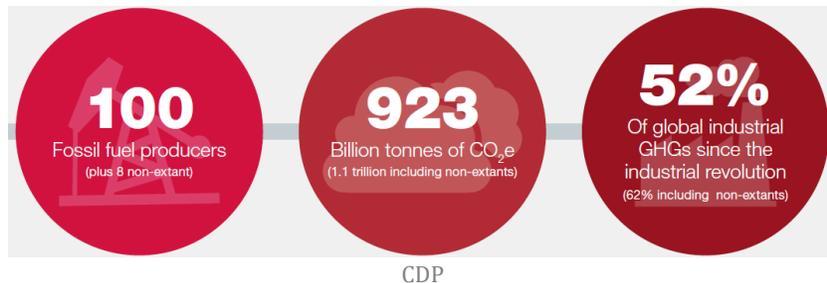
## Carbon Majors: 100 producers the source of 71% of emissions 1988-2015

The Climate Accountability Institute and CDP announce the release of the updated *Carbon Majors Dataset 2017*. These three reports quantify the pivotal role of the producers of oil, natural gas, and coal in driving global carbon dioxide emissions and highlight the risks and opportunities of companies to aide (or hinder) the transition to a low-carbon economy. The *Dataset* is an update of operational and product-use emissions attributed to the largest 100 investor- and state-owned companies from 1988 to 2015.<sup>1</sup>

Leading oil and gas companies profess broad support for climate action. While most companies have reduced operational emissions, oil & gas production and emissions are all increasing, exploration budgets are increasing,<sup>2</sup> and industry forecasts defy climate concerns. The *2017 Update* highlights the industry's role in reducing the carbon intensity of the global energy system and the urgency of accelerating industry commitment to align with the 2°C pathway (or well below) of the Paris Accord.

The dataset announced today covers global oil, natural gas, and coal production activity of the largest 100 fossil fuel producers from 1988 to 2015, and includes both operational (Scope 1) and product-related (Scope 3) emissions. On average, product emissions account for ~90 percent of a company's total, with operational emissions ~10 percent. Scope 1 emission sources include vented CO<sub>2</sub> from gas processing, flaring of associated gas, companies' use of own fuels, and vented and fugitive methane. Scope 3 emissions account oil/coal quality, and deducts for non-energy uses.

Producing companies bear considerable responsibility and stewardship obligations for emissions and impacts from the use of their carbon fuel products used as intended by consumers worldwide — especially going forward to 2050, in alignment with science-based targets. While this dataset covers the period since the establishment of the Intergovernmental Panel on Climate Change in 1988, recent research has uncovered industry research and corner-office awareness of the risks of climate change and fossil products since 1980, if not a decade or two earlier.<sup>3</sup>



### Key findings:

- Global fossil fuel emissions from 1988 to 2015 totaled 749 billion tonnes of carbon dioxide and energy-related methane (GtCO<sub>2</sub>e);
- 100 companies are the source of 85% of fossil fuel CO<sub>2</sub> and methane and 71% of all industrial fossil fuel and cement CO<sub>2</sub>, methane, nitrous oxide, and F-gases 1988-2015 (833 GtCO<sub>2</sub>e if all industrial sources included);
- Fifty percent of all industrial emissions of carbon dioxide and methane since 1988 can be traced to the operations and products of the world's 64 largest oil and gas companies;
- Ten of those companies — Saudi Aramco, Gazprom, National Iranian, ExxonMobil, Pemex, Royal Dutch Shell, PetroChina, BP, Chevron, and Petroleos de Venezuela — are responsible for 26% of all fossil fuel emissions and 45% of all oil & gas sector emissions since 1988;
- Since 1988, the 64 oil and gas companies contributed 40 GtCO<sub>2</sub>e of operational emissions and 337 GtCO<sub>2</sub> in emissions from the use of their products (deducting for non-energy uses, e.g., petrochemicals, lubricants);

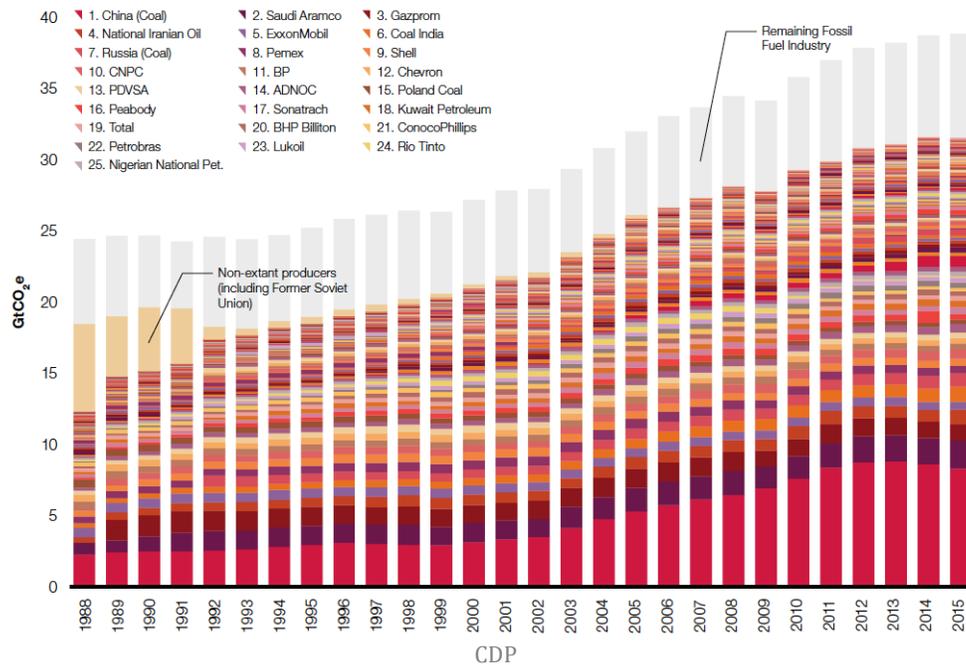
<sup>1</sup> The CDP / CAI Dataset is an update of: Heede, Richard (2014) Tracing anthropogenic CO<sub>2</sub> and methane emissions to fossil fuel and cement producers 1854-2010, *Climatic Change*, vol. 122(1):229-241.

<sup>2</sup> Oil & Gas Journal (2017) Barclays: Global E&P spending growth revised to 9% for 2017, 14 March.

<sup>3</sup> Banerjee et al. (2016) CO<sub>2</sub>'s Role in Global Warming Has Been on the Oil Industry's Radar Since the 1960s, *InsideClimate News*, 13Apr. Banerjee, Neela (2015) Exxon's Oil Industry Peers Knew About Climate Dangers in the 1970s, Too, *ICN*, 22Dec.

- Coal production is dominated by China, Russia, Poland, Ukraine, and North Korea and other national coal producers (for which we are developing company historic production data); their coal production resulted in emissions totaling 264 GtCO<sub>2</sub>e;
- Twenty-nine investor-owned and state-owned coal producers lead to the emission of 94 GtCO<sub>2</sub>, or one-eighth of all fossil fuel emissions since 1988;
- Half of all industrial emissions of carbon dioxide since the dawn of the fossil fuel era have been emitted since 1988.

### Operational and product GHG emissions of 100 active fossil fuel producing entities, 1988-2015



### Conclusions:

- Oil and gas companies knew or should have known by 1980 that emissions from their products would destabilize the climate;
- Companies are slow to commit to reduce emissions and shifting capital investment to low-carbon energy sources in alignment with science-based targets to avoid exceeding 2°C of warming, much less “well below” 2°C; company performance varies and worth watching;
- Moreover, progress is slow: direct operational emissions, the focus of company mitigation efforts, are decreasing, but oil and gas production and product-use emissions are *increasing*.
- Many oil and gas companies are increasing the share of production of natural gas — Shell, Total, and Statoil, for example — but the shift from carbon-intensive liquid fuels to gas and renewables remains modest and merit careful attention by investors;
- Global emissions from both oil and gas are *increasing*;
- Carbon-intensities of products vary by company, chiefly driven by proportion of fuels from bitumen and heavy oils to light crudes and natural gas liquids, and natural gas.

Richard Heede, Director of CAI, concludes: “From carbon capture to clean energy, to methane mitigation to operational efficiencies, fossil fuel majors will have to demonstrate leadership by contributing to the low carbon transition at the scale and pace required. Fossil fuel extraction companies will need to plan their future in the context of a radical transformation of the global energy system. They owe it to the millions of clients they serve who are already feeling the effects of climate change, to consumers and investors, and to the many millions more that require energy for the comfort of their daily lives but are looking for alternatives to their products.”

Download all reports [here](http://www.climateaccountability.org/index.html). ([www.climateaccountability.org/index.html](http://www.climateaccountability.org/index.html))

**Acknowledgements:**

CAI appreciates the support and in-depth collaboration of Paul Griffin, Ian van der Vlugt, & Pedro Faria of CDP in updating this *Carbon Majors Dataset 2017*. CDP's analytical influence with institutional investors and with many of the oil, gas, and coal companies that voluntarily respond to CDP's energy and climate surveys brings needed visibility to the important issues described in this and future reports.

The Institute gratefully acknowledges financial support from Wallace Global Fund, Rockefeller Brothers Fund, and CDP (for methodology, analysis, and science-based targets).

**About Climate Accountability Institute:** CAI is an independent research and educational institute focusing on anthropogenic climate change, dangerous interference with the climate system, the contribution of fossil fuel producers' carbon production to atmospheric carbon dioxide content, and the risk and disclosure requirements of fossil fuel producers regarding emissions of greenhouse gases. CAI is currently analyzing the carbon-intensity of oil and gas supply chains, and modeling how a responsible oil & gas company can align its production and investment options with science-based targets under 2°C.

[climateaccountability.org](http://climateaccountability.org)

**About CDP:** CDP, formerly Carbon Disclosure Project, is an international, not-for-profit organization providing the global system for companies, cities, states, and regions to measure, disclose, manage, and share vital information on their environmental performance. CDP works with 827 institutional investors with assets of US\$100 trillion to motivate companies to disclose their impacts on the environment and natural resources and take action to reduce them. Nearly 6,000 companies with some 60% of global market capitalization disclosed environmental information through CDP in 2016.

[cdp.net](http://cdp.net)

**About the report:** The Carbon Majors dataset was originally constructed by Richard Heede of Climate Accountability Institute. It covered coal, oil, natural gas, and cement company emissions dating back to 1854. In this version, CDP and CAI have updated oil & gas and coal company emissions to 2015 and widened the sample of companies to rank the largest 93 emitting oil and gas companies (and seven coal-producing nations) of 2015.

**Download:**

[Carbon Majors Report 2017](#)

[Carbon Majors Methodology Report 2017](#)

Carbon Majors Dataset 2017

**CDP has issued a press release:**

[Carbon Majors Press Release, 10July2017. \(https://tinyurl.com/y88jplex\)](https://tinyurl.com/y88jplex)