OIL, GAS AND THE CLIMATE

An Analysis of Oil and Gas Industry Plans for Expansion and Compatibility with Global Emission Limits

REPORT BACKGROUNDER

Capital expenditure the oil and gas industry on new projects has risen since 2016, increasing production and carbon emissions. Over the next five years, oil and gas companies plan to invest at levels that would lock-in more than 2°C of warming. This is the case even if the use of coal ends overnight and emissions from cement are dramatically cut. 85 percent of this expansion is slated for the United States and Canada.

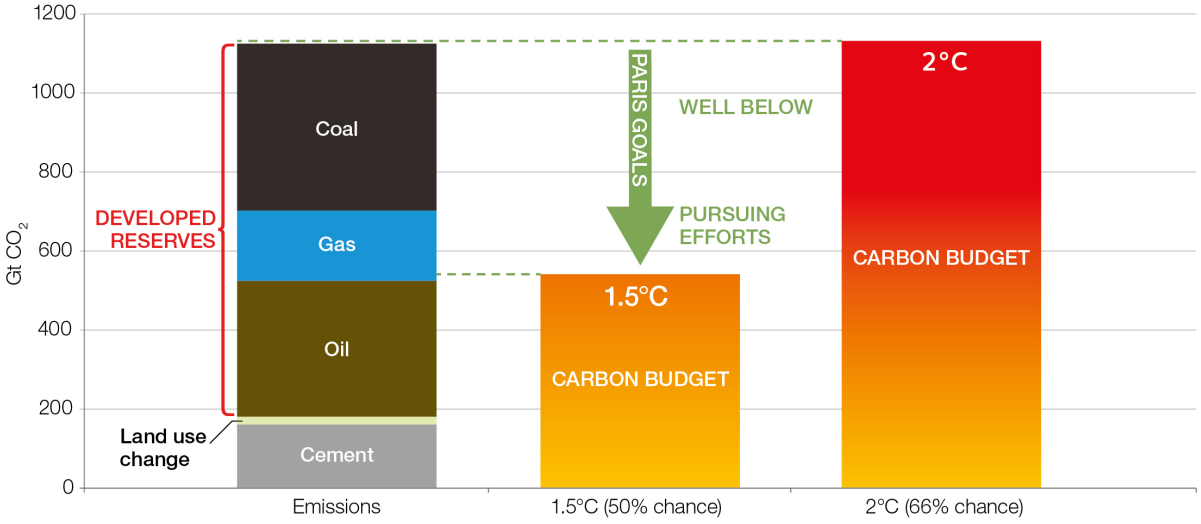
Oil, Gas and the Climate analyzes existing production capacity and the expansion plans of the oil and gas industry to determine compatibility with Paris climate goals. The conclusion of the analysis is consistent with the *Production Gap* report published by UN Environment Program (UNEP), Stockholm Environment Institute (SEI) and other leading research organizations that looks at the impact of country plans for fossil fuel expansion. **Fossil fuel production is incompatible with global climate goals. Efforts to phase out oil and gas extraction must start now.**

OIL, GAS AND THE CLIMATE TOPLINE FINDINGS:

No Room in the Carbon Budget for New Oil and Gas Production.

Carbon emissions from oil and gas in *operating* fields and mines push the world beyond 1.5°C of warming by 2030. Any expansion of oil and gas production would take us beyond 2°C.

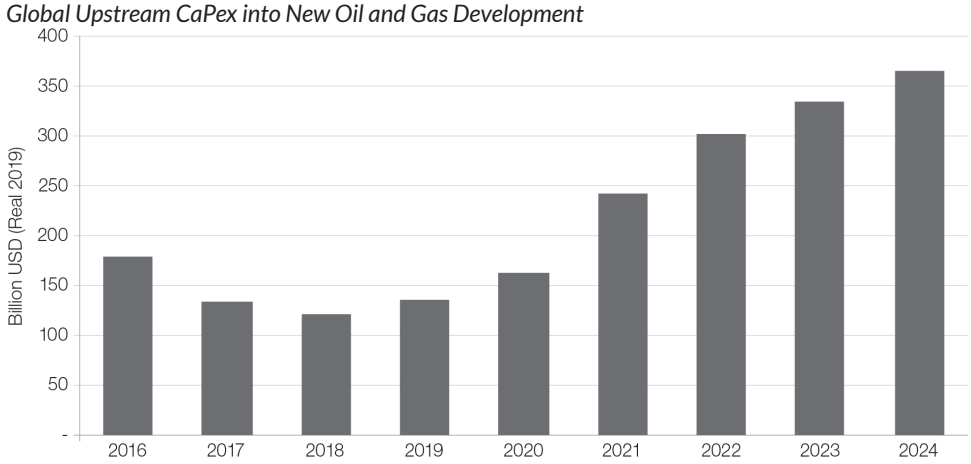
CO2 Emissions from Developed Global Fossil Fuel Reserves, Compared to Paris Goals Carbon Budgets



Over the Next Five Years, the Oil and Gas Industry Plans to Lock in More than 1.5 °C and even 2°C of Warming.

Between 2020 and 2024, oil and gas companies intend to invest USD 1.4 trillion in extraction, locking in the release of 148 gigatonnes of CO_2 from currently undeveloped reserves by 2050, equivalent to building over 1200 U.S. coal-fired power plants. This does not include investments in pipelines, export terminals and other related infrastructure.

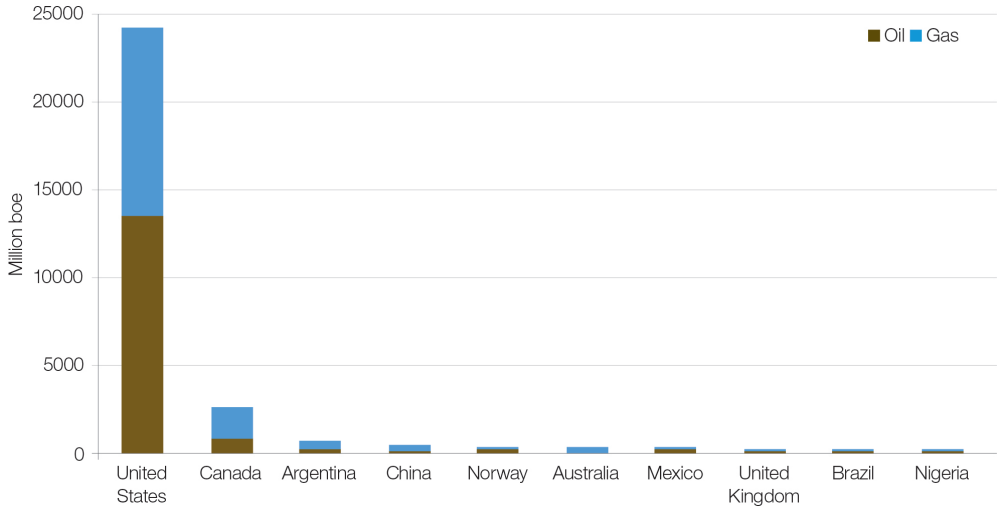
Global Upstream CaPex into New Oil and Gas Development



North America Accounts for 85 Percent of the Planned Extraction.

The majority of expanded production will be in the United States, followed by Canada, Argentina, China, Norway, Australia, Mexico, UK, Brazil, and Nigeria. The Permian Basin, spanning west Texas and southeastern New Mexico, is most at risk as more than one third of new production in the U.S. are intended for this region. In Canada, emissions from planned Alberta Oil Sands and shale gas extraction, particularly in the Montney Shale Basin in British Columbia, pose the most threat to the climate. For Argentina, planned extraction in the Neuquén Basin of Northern Patagonia in the Vaca Muerta formation will quadruple the country's cumulative emissions. Other countries covered in the report are set for substantial expansion as well. For example, Ecuador's oil and gas emissions are predicted to grow 40 percent, and Norway's 77 percent by 2050. Meanwhile, the UK's current plan would see two and a half times more oil and gas than currently produced.

U.S. expansion



Expansion of Oil and Gas on Every Continent is Incompatible with Climate Goals.

In addition to the United States, Canada, and Argentina; the scale of planned investments in Brazil, Ecuador, Guyana Denmark, Norway, United Kingdom, and Australia are of particular concern.

25 Companies are Responsible for Nearly 50 percent of Expansion

Twenty-five companies are responsible for nearly 50 percent of the production to 2050 resulting from new expansion of oil and gas in the next five years. Every major International Oil Company has sanctioned new oil and/or gas projects out of compliance with the Paris Agreement. This includes companies which claim to be responding to climate concerns, such as Shell Oil, BP, Total and Equinor. This unproven and costly technology can not be relied upon. It is widely accepted that emissions should be prevented from being released in the first instance.

Top 25 Companies by Production Unlocked from New Development between 2020-2024

Company	Production (Billion BOE)	Fully State Owned	Shale Percentage
GazProm	21.7	N	0%
Shell	17.7	N	60%
ExxonMobil	14.3	N	57%
Chevron	11.9	N	77%
Qatar Petroleum	11.1	Y	0%
Occidental	10.2	N	97%
PetroChina	10.0	N	54%
BP	7.4	N	53%
EOG Resources	5.7	N	100%
Saudi Aramco	5.2	Y	0%
Rosneft	5.1	N	0%
Total	4.8	N	6%
Equinor	4.3	N	27%
Abu Dhabi NOC	4.3	Y	0%
Government of Brazil	4.2	Y	0%
Encana	4.2	N	100%
Concho Resources	4.1	N	100%
Chesapeake	4.0	N	100%
Eni	4.0	N	0%
Petronas	4.0	N	20%
ConocoPhillips	3.8	N	66%
Cimarex Energy	3.6	N	100%
Antero Resources	3.6	N	100%
Pioneer Natural Resources	3.6	N	100%
CNOOC	3.5	N	11%
Total (Billion BOE)	176.4		

Billion Barrel Oil Equivalent includes oil and gas.

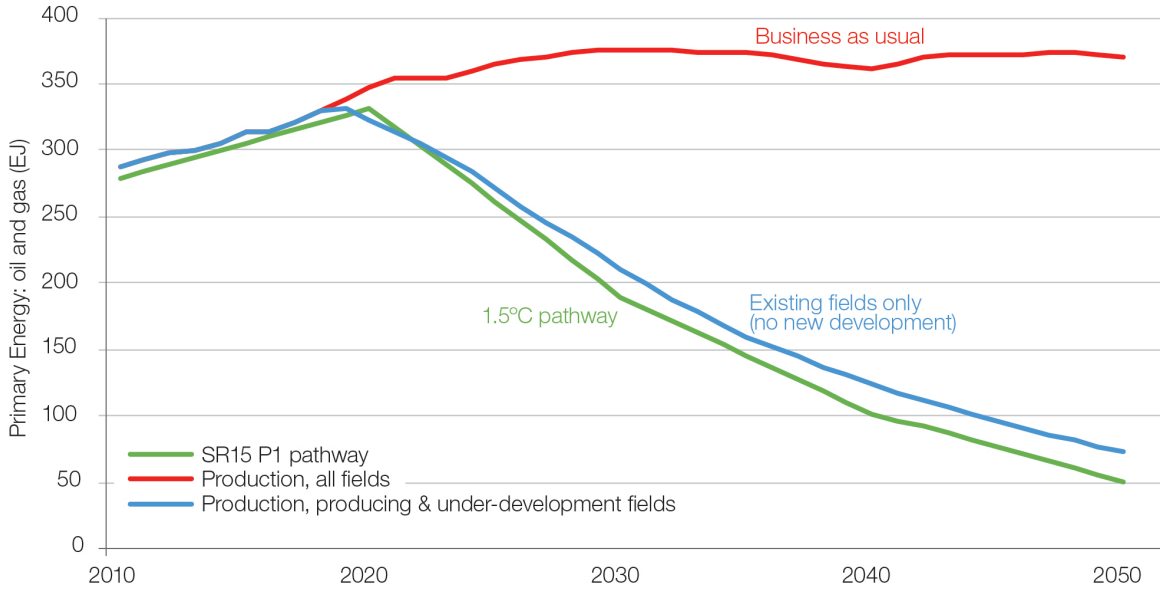
A Phase-Out of Oil and Gas is Possible.

Governments, investors, businesses and the public are moving in a new direction as growing evidence reveals investing in oil and gas locks in climate change, economic, health and environmental risks while limiting new opportunities. Increasing affordability of renewables is weakening the business case for fossil fuels while leading institutions such as the European Investment Bank, World Bank and others remove financing for upstream oil and gas projects. France, New Zealand, Denmark, Costa Rica, France and other countries have adopted full or partial licensing bans or moratoria. Consideration of similar policies is underway in a growing number of nations.

A New Standard of Climate Leadership is Needed.

Limiting warming to 1.5°C requires taking steps now to limit expansion of oil and gas production as well as wind down production from some existing fields and mines. Governments and institutions can achieve this by implementing bans on licenses, contracts and permits; removing finance and subsidies; and creating and implementing transition plans that consider the needs of workers and communities impacted by fossil fuel development with high-income countries leading the way.

Global Oil and Gas Extraction with and without New Development, Compared to Demand Aligned with 1.5°C



The report, "Oil, Gas and the Climate: An Analysis of Oil and Gas Industry Plans for Expansion and Compatibility with Global Emission Limits", is a project of the Global Gas and Oil Network, supported by Oil Change International; 350.org; Center for Biological Diversity; Center for International Environmental Law; CAN-Rac Canada; Earthworks; Environmental Defence Canada; Fundacin Ambiente y Recursos Naturales:FARN; Global Witness; Greenpeace; Friends of the Earth Netherlands (Milieudefensie); Naturvernforbundet; Observatorio Petrolero Sur; Overseas Development Institute; Platform; Sierra Club; Stand.Earth.

For the full report, please visit www.ggon.org