

# Revealed: the 'carbon bombs' set to trigger catastrophic climate breakdown

**Exclusive:** Oil and gas majors are planning scores of vast projects that threaten to shatter the 1.5C climate goal. If governments do not act, these firms will continue to cash in as the world burns

by **Damian Carrington** and **Matthew Taylor**

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The world's biggest fossil fuel firms are quietly planning scores of "carbon bomb" oil and gas projects that would drive the climate past internationally agreed temperature limits with catastrophic global impacts, a Guardian investigation shows.

The exclusive data shows these firms are in effect placing multibillion-dollar bets against humanity halting global heating. Their huge investments in new fossil fuel production could pay off only if countries fail to rapidly slash carbon emissions, which scientists say is vital.

The oil and gas industry is extremely volatile but extraordinarily profitable, particularly when prices are high, as they are at present. ExxonMobil, Shell, BP and Chevron have made almost \$2tn in profits in the past three decades, while recent price rises led BP's boss to describe the company as a "cash machine".

The lure of colossal payouts in the years to come appears to be irresistible to the oil companies, despite the world's climate scientists stating in February that further delay in cutting fossil fuel use would mean missing our last chance “to secure a liveable and sustainable future for all”. As the UN secretary general, António Guterres, warned world leaders in April: “Our addiction to fossil fuels is killing us.”

Details of the projects being planned are not easily accessible but an investigation published in the Guardian shows:

- The fossil fuel industry's short-term expansion plans involve the start of oil and gas projects that will produce greenhouse gases equivalent to a decade of CO<sub>2</sub> emissions from China, the world's biggest polluter.
- These plans include 195 carbon bombs, gigantic oil and gas projects that would each result in at least a billion tonnes of CO<sub>2</sub> emissions over their lifetimes, in total equivalent to about 18 years of current global CO<sub>2</sub> emissions. About 60% of these have already started pumping.
- The dozen biggest oil companies are on track to spend \$103m a day for the rest of the decade exploiting new fields of oil and gas that cannot be burned if global heating is to be limited to well under 2C.
- The Middle East and Russia often attract the most attention in relation to future oil and gas production but the US, Canada and Australia are among the countries with the biggest expansion plans and the highest number of carbon bombs. The US, Canada and Australia also give some of the world's biggest subsidies for fossil fuels per capita.

**The dozen biggest oil companies are on track to spend every day for the rest of the decade**

# \$103m

At the UN's Cop26 climate summit in November, after a quarter-century of annual negotiations that as yet have failed to deliver a fall in global emissions, countries around the world finally included the word "coal" in their concluding decision.

Even this belated mention of the dirtiest fossil fuel was fraught, leaving a "deeply sorry" Cop president, [Alok Sharma](#), fighting back tears on the podium after India announced a last-minute softening of the need to "phase out coal" to "phase down coal".

Nonetheless, the world agreed coal power was history – the question now was how quickly cheaper renewables could replace it, and how fair the transition would be for the small number of developing countries that still relied on it.

But there was no mention of oil and gas in the Cop26 final deal, despite these being responsible for almost 60% of fossil fuel emissions.

Furthermore, many of the rich countries, such as the US, that dominate international climate diplomacy and positioned themselves as climate leaders at the conference, are big players in new oil and gas projects. But unlike [India](#), they avoided criticism.

That lack of scrutiny prompted the Guardian to spend the months since Cop26 piecing together the clearest picture possible of forthcoming oil and gas exploration and production.

## Code red

The world's scientists agree the planet is in deep trouble. In August, Guterres reacted strongly to a stark report by the Intergovernmental Panel on Climate

Change, the world's leading authority on climate science. "[This report] is a code red for humanity," he said.

The IPCC states carbon emissions must fall by half by 2030 to preserve the chance of a liveable future, yet they show no sign of declining.

Experts have been warning since at least 2011 that most of the world's fossil fuel reserves could not be burned without causing catastrophic global heating.

In 2015, a high-profile analysis found that to limit global temperature below 2C, half of known oil reserves and a third of gas had to stay in the ground, along with 80% of coal.

**“Simply put, they are lying and the results will be catastrophic,” said Guterres.**

**“Investing in new fossil fuels infrastructure is moral and economic madness.”**

Today, the problem is even more acute. A better understanding of the devastating impacts of the climate crisis has led to the internationally agreed limit for global heating being lowered to 1.5C, to cut the risks of extreme heatwaves, droughts, and floods.

In May 2021, a report from the International Energy Agency, previously seen as a conservative body, concluded there could be no new oil or gas fields or coalmines if the world was to reach net zero by 2050.

More warnings soon followed. An updated scientific analysis found the proportion of fossil fuel reserves that would need to stay in the ground for 1.5C jumped to 60% for oil and gas and 90% for coal, while the UN warned that planned fossil fuel production “vastly exceeds” the limit needed for 1.5C.

In April, shocked by the latest IPCC report that said it was “now or never” to start slashing emissions, Guterres launched an outspoken attack on companies and governments whose climate actions did not match their words.

“Simply put, they are lying, and the results will be catastrophic,” he said.

“Investing in new fossil fuels infrastructure is moral and economic madness.

“Climate activists are sometimes depicted as dangerous radicals. But the truly dangerous radicals are the countries that are increasing the production of fossil fuels.”

The reaction to Russia’s war in Ukraine has pushed oil and gas prices even higher, further incentivising bets on new fields and infrastructure that would last decades.

The failure of countries to “build back greener” after the Covid-19 pandemic or the 2008 financial crash was not a good omen, and Guterres said: “Fossil fuel interests are now cynically using the war in Ukraine to lock in a high-carbon future.”

Assessing future oil and gas developments is challenging: the sector is complex and often secretive, public information is scarce and hard to find and assess. But a global team of Guardian environment reporters has worked with leading thinktanks, analysts and academics across the world over the past five months and now we can answer a series of questions that reveal the scale of the sector’s plans.

First, how much production is due to come from the projects that are likely to start drilling before the end of this crucial decade?

Next, where exactly are the biggest projects around the world, the so-called carbon bombs that would explode the climate?

We also followed the money: how much is going to be spent on oil and gas that cannot be burned safely, rather than invested in clean energy? And who benefits most from the fossil fuel subsidies that hide the true damage they cause?

The answers to these key questions lead to an inescapable conclusion: if the projects go ahead, they will blow the world’s rapidly shrinking cap on emissions that must be kept to enable a liveable future – known as the carbon budget.

For all the promises made by many oil companies, the data shows they remain committed to their core business despite the consequences.

## Plans to expand

The short-term expansion plans of oil and gas companies, such as ExxonMobil and Gazprom, are colossal. The Guardian's investigation has found that in the next seven or so years, they are likely to start producing oil and gas from projects that would ultimately deliver 192bn barrels, the equivalent of a decade of today's emissions from China.

This estimate was provided by analysts at Urgewald, who used data from Rystad Energy, the industry standard source but not publicly available.

Their Gogel database includes 887 companies that explore for and produce oil and gas, and covers 97% of short-term expansion plans.

The companies have made a final financial commitment to projects that will deliver 116bn barrels, more than half of the 192bn barrel total.

They have also invested heavily in the rest, including final development, engineering and operation plans. Such investment makes these projects likely to go ahead, barring drastic government action, Urgewald says.

## **Companies have already made their final financial commitment to projects that will deliver 116bn barrels of oil**

# 116bn

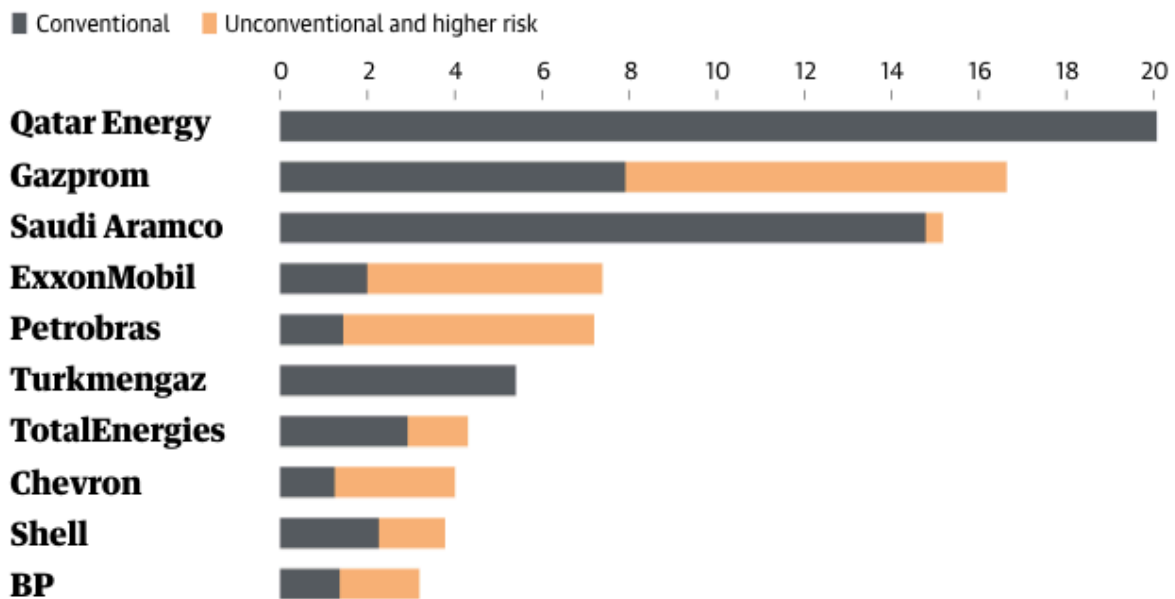
A third of the short-term expansion plans of oil and gas would come from “unconventional” and riskier sources. These include fracking and ultra-deep offshore drilling, which are inherently more dangerous – as the oil and gas companies drill deeper, the number of spills, injuries and blowouts increase.

The 192bn barrels are split roughly 50:50 between liquids, including crude oil, and gas. Burning this would produce 73bn tonnes of CO<sub>2</sub>. But methane routinely leaks from gas operations and is a powerful greenhouse gas, trapping 86 times more heat than CO<sub>2</sub> over 20 years. Including this impact, at a

standard supply-chain leak rate of 2.3%, means the equivalent of 97bn tonnes of CO2 added to the atmosphere and driving us faster towards climate hell.

## Huge oil and gas expansion is planned to start in the next seven years

Resources under development or field evaluation in 2021, billions of barrels



Guardian graphic. Source: Urgewald Global Oil and Gas Exit List. Note: time period is three years for fracking

State oil companies lead the Urgewald short-term expansion list, with Qatar Energy, Russia’s Gazprom and Saudi Aramco the top three. Half of Gazprom’s projected expansion is in the fragile Arctic, though the long-term implications of Russia’s war in Ukraine on its fossil fuel plans remain to be seen.

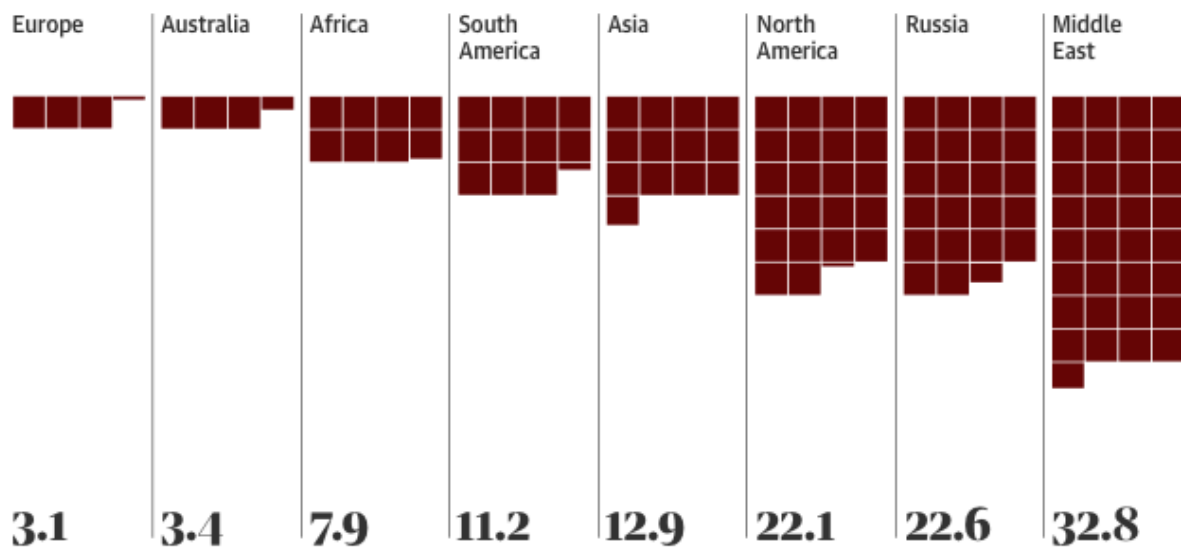
The listed oil majors ExxonMobil, Total, Chevron, Shell and BP are all in the top 10. Unconventional and risky oil and gas production accounts for about 70% of the US majors’ totals, while the proportion of fracking and ultra-deep water ranges from 30% to 60% for the European companies.

“Most oil and gas companies are just proceeding with business as usual,” Nils Bartsch at Urgewald said. “Some just do not care. Some do not see their responsibility because governments around the world let them proceed, although of course these governments are often influenced by the industry.”

Two-thirds of the 116bn barrels of oil and gas projects companies are financially committed to are in the Middle East, Russia and North America, according to data provided by Rystad Energy.

## The Middle East, US and Russia dominate future oil and gas production plans

Resources in financially sanctioned future projects, billions of barrels



Guardian graphic. Source: Rystad Energy UCube

Australia is anticipated to be a big contributor with 3.4bn barrels, more than from the whole of Europe, where fields are relatively depleted.

A separate analysis for the Guardian by Urgewald on the average annual investment in oil and gas exploration over the past three years shows that, along with Shell, three large but rarely scrutinised Chinese companies occupy the top four slots: PetroChina, [China National Offshore Oil Corporation](#), and Sinopec. Seven of the top 10 of these explorers are relying on fracking, ultra-deep water Arctic and tar sands developments for more than half of their expansion.

## Carbon bombs

Daniel Ribeiro has been fighting plans for a massive offshore pipeline and liquefied natural gas plant in Cabo Delgado province, Mozambique, since it was mooted more than 15 years ago.



The scheme, which would lead to a huge increase in carbon emissions in one of the poorest and most climate-vulnerable countries, is backed by more than £1bn from the UK government and has some of the biggest oil and gas corporations circling, scenting another huge payday.

## **Research shared exclusively with the Guardian has identified the development in Cabo Delgado will drive catastrophic climate breakdown around the world**

“It is already creating a massive amount of disruption for the local fishing and subsistence farmers who are being moved off their land,” said Ribeiro, from the local Justiça Ambiental campaign group. “But if it goes ahead and countries like Mozambique are set off on a fossil fuel track, it will be a global disaster. We can forget tackling the climate crisis ... we will all suffer.”

Research shared exclusively with the Guardian has identified the Cabo Delgado development as one of 195 carbon bombs, which – unless stopped – will drive catastrophic climate breakdown around the world.

The term carbon bomb has been widely used in climate circles for the past decade to describe large fossil fuel projects or other big sources of carbon. The new research sets a specific definition: projects capable of pumping at least 1bn tonnes of CO<sub>2</sub> emissions over their lifetimes.

Projects identified include the new drilling wells springing up in the Canadian wilderness as part of the vast Montney Play oil and gas development, and the huge North Field gas fields in Qatar – named in the study as the biggest new oil and gas carbon bomb in the world.

The study, led by Kjell Kühne from the University of Leeds in the UK and due to be published in the journal Energy Policy, found that just a few months after many of the world’s politicians positioned themselves as climate leaders during the Cop26 conference in Glasgow, they were giving the green light to a massive global expansion of oil and gas production that scientists warn would push civilisation to the brink.

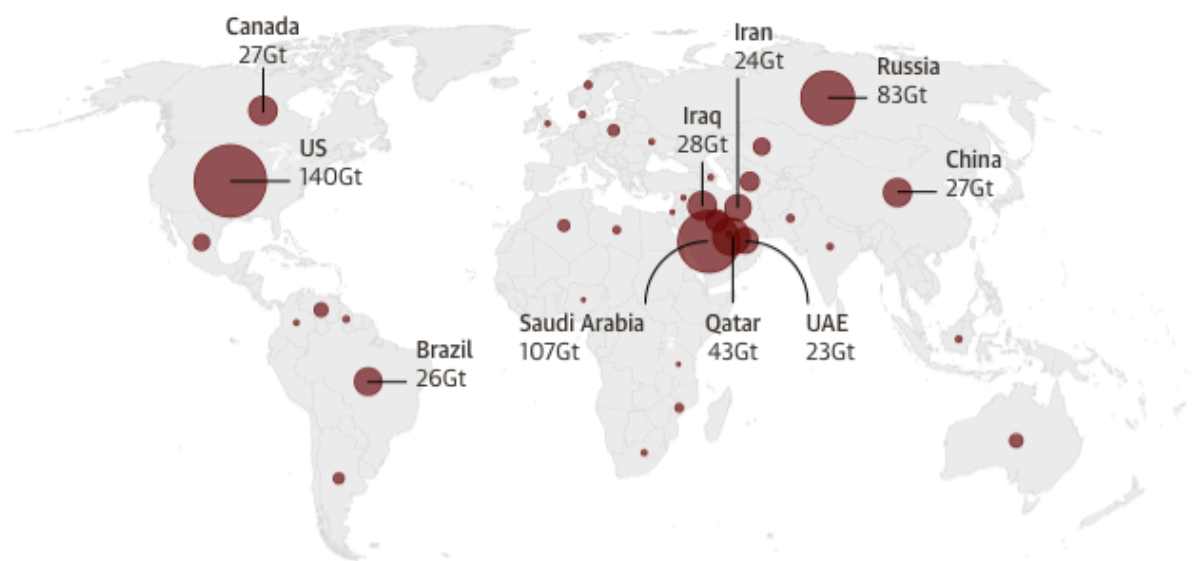
Asad Rehman, a leading climate justice activist in the UK who was at the forefront of a global network of indigenous activists and civil society

campaigners in Glasgow, accused the US, Canada and Australia of “rank hypocrisy”.

“These countries are single-handedly undermining efforts to curtail global emissions and ignoring their responsibility to phase out fossil fuels rapidly and justly.” He said it was the poorest and most vulnerable who were suffering.

## **Twenty-two mega-projects in the US account for more than a fifth of potential emissions from global ‘carbon bombs’**

Potential carbon emissions from carbon bombs by country, GtCO<sub>2</sub>



Guardian graphic. Source: Kühne, Energy Policy, 2022. MENA = Middle East and North Africa

**Together these projects would produce 646 GtCO<sub>2</sub> emissions, swallowing up the world’s entire carbon budget**

# 646Gt

“Only the colonial mindset of political leaders in rich countries can make the brutal calculation that the interest of fossil fuel giants and their billions in profit

is more important than the lives of people who are overwhelmingly black, brown and poor.”

Together these projects would produce 646bn tonnes of CO<sub>2</sub> emissions, the study says, swallowing the world's entire carbon budget. More than 60% of these schemes are already operating.

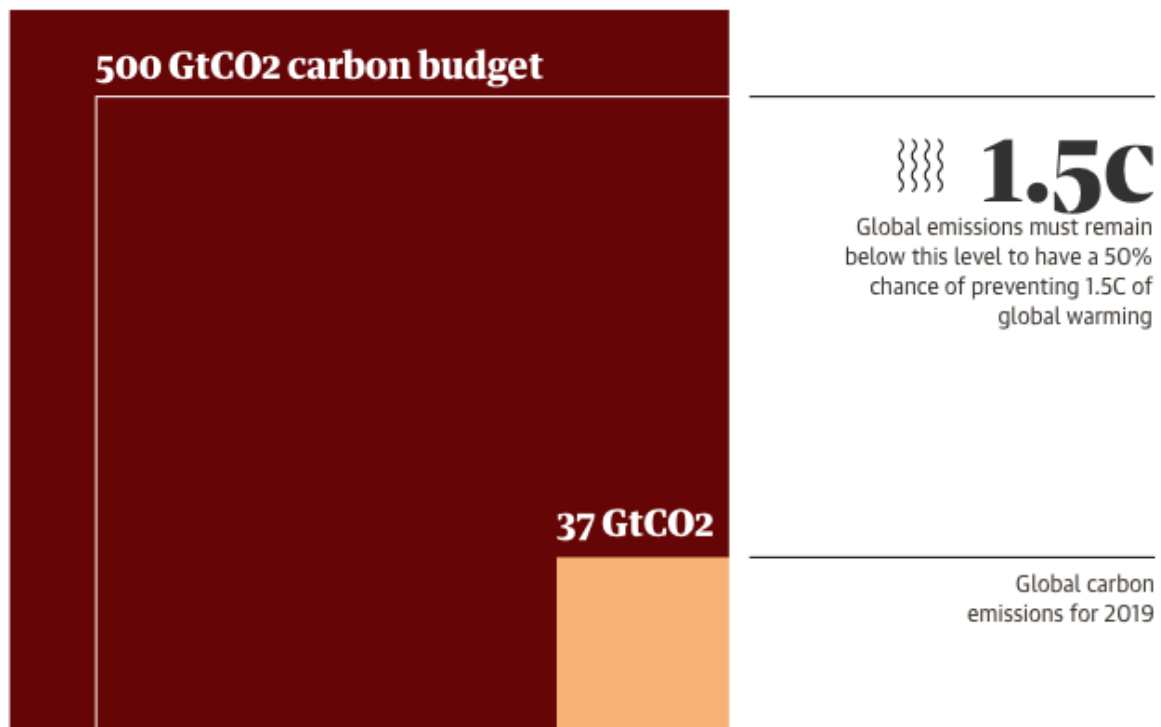
Kühne, the director of the Leave it in the Ground Initiative, said in the first instance, the 40% of projects that had not yet started production must be stopped if the world was to avoid sliding ever more quickly towards catastrophe, adding they should be a prominent focus of the global climate protest movement in the months and years ahead.

“The oil and gas industry is continuing to plan these huge projects, even in the face of a burning planet. The ambitious targets of the Paris agreement were apparently not enough to make them question their business case. These carbon bombs are the single biggest indicator that we are not trying hard enough.”

The study is based on data from Rystad Energy but, rather than focusing on total barrels, it identifies the mega projects potentially responsible for the biggest emissions.

**Emissions from the carbon bomb projects would reach 646 GtCO<sub>2</sub>, exceeding the global carbon budget**

**646 GtCO<sub>2</sub>**



Guardian graphic. Sources: Kühne, Energy Policy, 2022, IPCC, World in Data

According to the research, the US is the leading source of potential emissions. Its 22 carbon bombs include conventional drilling and fracking, and span the deep waters of the Gulf of Mexico to the foothills of the Front Range in Colorado to the Permian basin. Together they have the potential to emit 140bn tonnes of CO<sub>2</sub>, almost four times more than the entire world emits each year.

Saudi Arabia is the second biggest potential emitter after the US, with 107bn tonnes, followed by Russia, Qatar, Iraq, Canada, China and Brazil.

Australia, widely condemned by international leaders as a laggard in addressing the climate crisis, ranks 16th.

Robyn Churnside, a Ngarluma elder on the Burrup peninsula in remote north-west Australia, has been fighting fossil fuel and mining developments since the 1970s. She is part of a campaign trying to stop Woodside's US\$12bn Scarborough gas project, one of the biggest fossil fuel developments in the country in a decade.

Churnside said dissenting Indigenous voices were too often ignored when decisions were made about new oil and gas infrastructure that could lock in emissions for decades and desecrate culturally significant sites, which in some cases had stood for tens of thousands of years.

“It’s about time the world listened to First Nations people because we have been here a long, long time,” she said. “Our spirit in this land will never rest. It needs protection.”

Prof Kevin Anderson, from the Tyndall Centre of Climate Research, University of Manchester and Uppsala University, Sweden, said the scale of planned production in the face of all the evidence suggested big oil and its political supporters either did not believe the climate science or thought their extreme wealth could somehow protect them and their children from the devastating consequences.

“Either the scientists have spent 30 years working on this issue and have got it all wrong – the big oil CEOs know better – or, behind a veil of concern, they have complete disregard for the more climate vulnerable communities, typically poor, people of colour and far away from their lives. Equally worrying, they are disinterested in their own children’s future.”

## The money

When BP reported its quarterly earnings in a presentation to financial institutions in February, one analyst said he “really enjoyed the camaraderie and the positivity that you’re generating”, before asking about the company’s cash position.

“We’ve given you a lovely little chart,” said Murray Auchincloss, BP’s chief financial officer. “Certainly, it’s possible that we’re getting more cash than we know what to do with. For now, I’m going to be conservative and manage the company as if it’s \$40 [a barrel] oil. Anything we could get above that just helps, obviously.” At the time, the oil price exceeded \$90; today it is \$106.

The oil industry is awash with cash. The money companies have belongs to shareholders, including pension funds, or in the case of national oil companies, to governments and, in theory at least, citizens. But the investment plans of the biggest oil companies are sharply at odds with the goal of halting the climate crisis.

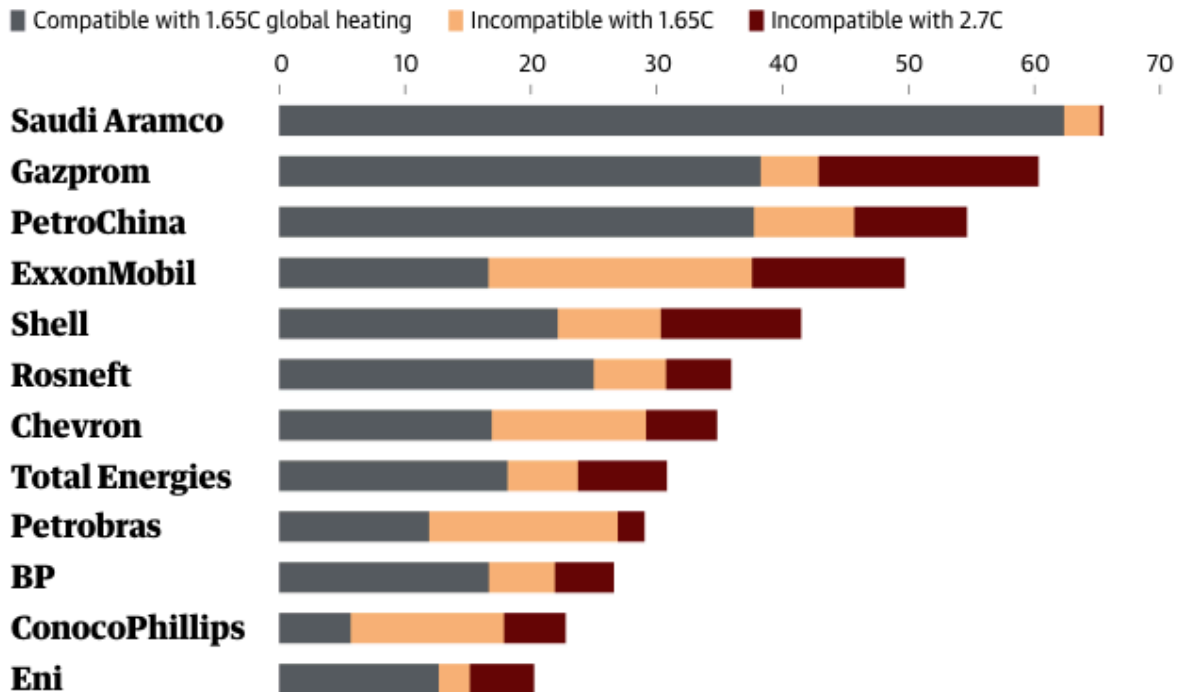
Data obtained by the Guardian from the thinktank Carbon Tracker shows a dozen of the world's biggest companies are on track to commit a collective \$387m dollars a day of capital expenditure to exploiting oil and gas fields through to 2030.

A significant portion of this is for maintaining production at existing projects - some oil and gas will still be needed as the world weans itself off fossil fuels - but the exact amount is not publicly available. Nonetheless, it is clear that at least a quarter of this investment - \$103m a day - is for oil and gas that cannot be burned if the worst impacts of the climate crisis are to be avoided, money that could instead be spent ramping up clean energy.

Even more worryingly, the companies have developed further project options that might lead them to spend an additional \$84m a day that would not even be compatible with a devastating 2.7C of global heating.

## Major companies plan to spend many millions a day to 2030 on exploiting new oil and gas

Capital expenditure per day 2021-2030, \$m



Guardian graphic. Source: Carbon Tracker Initiative / Rystad Energy

The world's governments agreed in the [Paris climate accord](#) to limit global heating to well below 2C, and pursue efforts to limit the temperature rise to 1.5C. For the latter, stricter goal, no new oil and gas projects are possible.

The Carbon Tracker data, compiled in September, uses a temperature of 1.65C to represent the well below 2C target and finds that 27% of the companies' projected investments are incompatible with this.

[ExxonMobil has the largest of these climate-busting investment plans](#) at \$21m a day through to 2030, followed by Petrobras (\$15m), Chevron and ConocoPhillips (both \$12m), and Shell (\$8m).

In terms of the most dangerous investments – those that could help drive temperatures beyond 2.7C – Gazprom accounts for \$17m a day of this, ExxonMobil \$12m, Shell \$11m and PetroChina \$9m.

If governments act on the scientific advice to rapidly reduce carbon emissions by boosting clean energy and cutting fossil fuel burning, the companies would

have to write off these colossal sums as losses, hitting shareholders, pension funds and public finances. If governments do not act, the companies could cash in as the world burns.

Overall, the international oil companies are making the biggest bets, with almost 40% of their projected investments incompatible with 1.65C.

ExxonMobil is particularly high, at 56%. The national oil company average is 17%, although 56% of Petrobras's planned capital expenditure is incompatible with 1.65C.

“Companies that continue to develop projects based on business-as-usual demand are betting on the failure of policy action on climate and underestimating the disruptive potential of new technologies, such as renewables and battery storage,” said Mike Coffin at Carbon Tracker. “Such projects are either not needed or they lead to warming well in excess of Paris goals.”

A separate recent analysis based on Rystad Energy data from April, after Russia's invasion of Ukraine, found that 20 of the world's biggest oil and gas companies remained on course to spend huge sums – \$932bn – by the end of 2030 developing new oil and gas fields.

Freeing the world from the grip of fossil fuels is made far harder by huge ongoing subsidies for the fuels, making them far cheaper than their true cost when the damage they cause is included – especially air pollution, which kills 7 million people a year. The G20 group of leading economies pledged in 2009 to phase out the subsidies but little has been achieved.

Hundreds of billions of dollars in direct financial support is received by the producers and consumers of fossil fuels every year – but they benefit from far larger subsidies by not paying for the harm burning fossil fuels causes. When the damage from the climate crisis and air pollution is accounted for, the fossil fuel subsidies reach \$6tn a year, according to the International Monetary Fund (IMF). Guardian analysis shows this is equivalent to \$11m a minute globally, \$4m a minute in China and more than \$1m in the US.

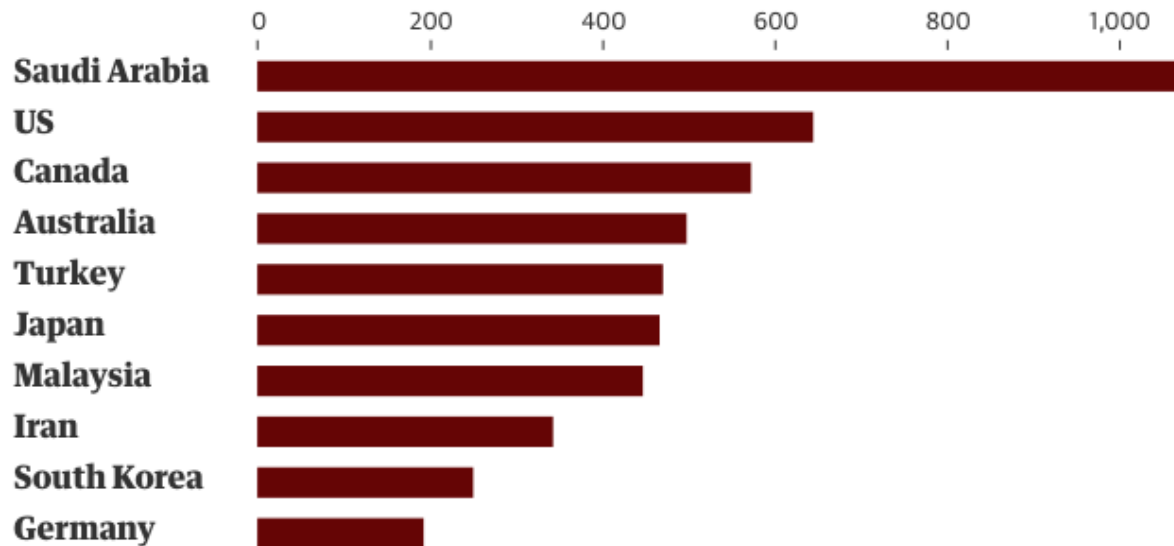
Guardian analysis of more detailed IMF data shows drivers in the US, Canada and Australia, along with Saudi Arabia, are the world's biggest beneficiaries of



subsidies for road fuels, with some governments under pressure to increase these during the current energy crisis.

## US, Canada and Australia are major subsidisers of fossil road fuels

Subsidies for diesel and gasoline, \$ per capita in 2020



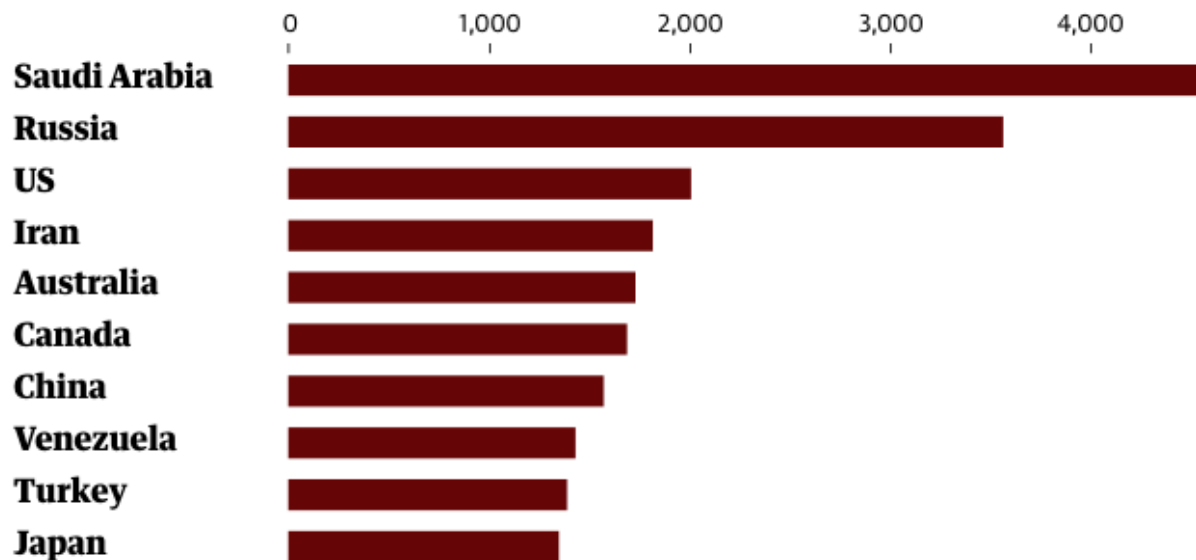
Guardian graphic. Source: Guardian analysis of IMF data. Note: ranking is for countries with populations of 25 million or more

The per capita subsidy for petrol and diesel across the population of Saudi Arabia was more than \$1,000 a year in 2020. In the US, the road fuel subsidy per capita is \$644 and about \$500 in both Canada and Australia.

Japan and Germany also appear in the top 10 of the road fuel analysis, which focused on the 54 large countries with more than 25 million people and that account for 90% of global population and subsidies. The UK per capita subsidy for road fuels was only \$10 a year, indicating taxes on petrol and diesel in 2020 were close to the level of the damage burning the fuels causes.

## Saudi Arabia, Russia and US are the biggest subsidisers of fossil fuels

Subsidies for fossil fuels, \$ per capita in 2020



Guardian graphic. Source: Guardian analysis of IMF data. Note: ranking is for countries with populations of 25 million or more

The US is also high on the list of the biggest per capita subsidies for all fossil fuels with \$2,000 a year, behind only Saudi Arabia (\$4,550) and Russia (\$3,560). After these countries, only Iran (\$1815) is ahead of Australia (\$1730) and Canada (\$1690).

“Taking the Paris agreement seriously requires a rapid shift away from fossil fuels,” said Simon Black, a climate economist at the IMF. “Getting fossil fuel prices right will help enormously in accelerating this transition.”

## The transition

The shift from burning oil and gas cannot happen overnight, and a declining amount will still need to be burned during the transition to a net zero emissions global economy in 2050. The question is whether companies and governments are moving fast enough.

The Guardian wrote to the oil and gas companies named in its analysis and asked for their response.

“Under the IEA net zero emissions scenario, and all Paris-aligned scenarios, all energy sources remain important through 2050, and oil and natural gas remain essential components of the energy mix,” said a spokesperson for ExxonMobil.

However, the role of oil and gas would be vastly reduced in 2050, and the IEA said: “Beyond projects already committed as of 2021, there are no new oil and gas fields approved for development [in our net zero scenario].”

ExxonMobil planned to invest more than \$15bn on initiatives to lower greenhouse gas emissions over the next six years, the spokesperson said, including carbon capture and storage, hydrogen and biofuels. The company aimed to achieve net zero emissions by 2050 but only from its own operations, not the fuels it sold, therefore covering only a small fraction of the emissions from the oil and gas it sells.

A spokesperson for Shell cited recent company statements: “As a result of [our] planned level of capital investment, we expect a gradual decline of about 1-2% a year in total oil production through to 2030, including divestments.”

**“The world is in a race against time,” said Guterres. “It’s time to end fossil fuel subsidies and stop the expansion of oil and gas exploration.”**

“By 2025, Shell expects its expenditure on [low and zero-carbon] products and services across its businesses will have increased to around 50% of its total expenditure,” a recent report by the firm states. In 2022, the proportion is expected to be more than 35%. In 2021, “Shell achieved its annual investment targets in renewables and energy solutions of \$2bn-3bn”, the report says.

ConocoPhillips also cited a recently published net zero emissions plan: “Our goal is to support an orderly transition that matches supply to demand and focuses on returns on, and of, capital while safely and responsibly delivering affordable energy.”

The document states that profits from oil and gas projects are significantly higher than from investments in renewable energy.

ConocoPhillips has allocated \$200m in 2022 to reduce emissions from its operations. To reduce emissions from the burning of the fossil fuels it supplies, the company advocates an “economy-wide price on carbon that would help shift consumer demand from high-carbon to low-carbon energy sources”.

“Petrobras plans its investments considering that the Paris agreement will be successful and global temperature will be kept below 2°C,” a spokesperson for the company said. “Oil will remain important in the coming decades, even in accelerated transition scenarios.”

The spokesperson said the IEA’s scenario for 1.65C indicated some investment in upstream projects was needed. “We are planning for highly resilient assets competitive in scenarios aligned with Paris due to their low production cost and low emissions. Petrobras is following its strategy of maximising the value of its portfolio, [with 99% of the investment on exploration] focusing on deepwater and ultra-deepwater assets.”

TotalEnergies pointed to its recent sustainability report, which it said “showed our stakeholders that we are already on the right track”. The company has a target of a 30% cut in emissions from oil and gas sales by 2030 and to increase the proportion of its energy sales that are renewable from 9% in 2021 to 20% in 2030.

Saudi Aramco and Eni responded to the Guardian but declined to comment. The other companies did not respond to the Guardian’s request.

## Race against time

The Guardian’s investigation has provided an answer to the question of how great a danger the plans of oil and gas companies pose to the climate.

But there is another set of questions, those for politicians and governments, that will ultimately affect the course of the climate emergency.

Will the world's governments act to close the book on the oil companies' giant climate gamble? Will richer countries, historically most responsible for emissions, support a just transition for developing countries on the frontline of the escalating crisis?

Would strong, immediate action lead to a financial crash, as billions of dollars are wiped off the value of some of the world's biggest companies? Or will more steady but concerted action wean us off fossil fuels rapidly, close the oil companies' cash machine and lead us into a clean energy future with a liveable climate? Only time will tell. But, unlike oil and gas, time is in very short supply.

“The world is in a race against time,” said Guterres. “It is time to end fossil fuel subsidies and stop the expansion of oil and gas exploration.”

Reflecting on the war in Ukraine, he said: “Countries could become so consumed by the immediate fossil fuel supply gap that they neglect or knee-cap policies to cut fossil fuel use. This is madness. Addiction to fossil fuels is mutually assured destruction.”

*Additional reporting by Jillian Ambrose, Adam Morton, Nina Lakhani, Oliver Milman and Chris McGreal.*