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3 Big Myths about Natural Gas and Our Climate

Fossil fuels (all of them!) are the energy of the past. With new technologies like wind, solar, and advanced batteries in our hands, we can power today and tomorrow with clean, reliable energy that doesn't harm our health and destroy our planet.

Natural gas is a growing energy source – one many are putting a lot of faith in.

Proponents like to portray the fuel as a cuddlier cousin to coal and oil when it comes to climate because it generates less carbon dioxide when burned. But its CO₂ emissions are only one piece of a far more nuanced puzzle.

Many of the arguments in support of natural gas are based on outdated or incorrect information – sometimes going so far as to border on wishful thinking. That's why we're setting the record straight on some of the most common myths about natural gas and our climate.

Natural gas will not solve the climate crisis.

When people make this argument, they're (mostly) referring to one thing in particular that is indeed true of natural gas: a new, efficient natural gas power plant [emits around 50 percent less carbon dioxide \(CO₂\)](#) during combustion when compared with a typical coal-based power plant, according to the [National Energy Technology Laboratory \(NETL\)](#).

To be sure, we should take seriously any source of energy that reduces our dependence on coal and oil, the primary sources of the carbon emissions that drive climate change. But let's also engage in some real talk: 50 percent less CO₂ also isn't zero CO₂, and CO₂ isn't the only harmful emission generated by natural gas development.

We're *still* talking about a fossil fuel here, one that *still* contributes to climate change when burned. And achieving **net-zero** greenhouse gas emissions by the second half of this century is essential to the long-term health of our planet.

That number also doesn't take into account all of the carbon emissions that happen across the full life cycle of natural gas, particularly during extraction, infrastructure construction, transport, and storage. But rather than dwell, let's just get straight to the real climate Big Bad when it comes to natural gas – methane.

Methane is a very, very powerful greenhouse gas. In the atmosphere, compared to carbon, it's fairly short-lived: only about 20 percent of the methane emitted today will still be in the atmosphere after 20 years. However, when it first enters the atmosphere, [it's around 120 times more powerful](#) than CO₂ at trapping heat and 86 times stronger over a 20 year period.

(Carbon dioxide hangs around for *much* longer: As much as 15 percent of today's carbon dioxide will still be in the atmosphere in 10,000 years.)

And a lot of the methane that ends up in the atmosphere comes from natural gas production.

“The drilling and extraction of natural gas from wells and its transportation in pipelines results in the leakage of methane,” [Union of Concerned Scientists \(UCS\) notes](#). “Preliminary studies and field measurements show that these so-called ‘fugitive’ methane emissions range from 1 to 9 percent of total life cycle emissions.”

(When we talk about “total life-cycle emissions,” we're talking all emissions from the source, including those leaked during its extraction, transportation, and more, and not just what is emitted when a fuel source is burned to create energy.)



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If you're thinking, "The difference between 1 and 9 percent is a pretty big deal," you're absolutely right. It's also an *exceptionally* important metric when talking about the relative value of natural gas in the climate fight. For a natural gas power plant to have lower life-cycle emissions than a coal plant (as proponents keep claiming is the benefit), the entire system's methane leakage [must be kept below 3.2 percent](#).



Natural gas is not environmentally friendly.

We need to be very clear here: Natural gas is *not* a clean form of energy. Cleaner than coal? Sure – but that's not saying a heck of a lot. Clean like solar or wind? *Get out of here!*

To start, the extraction process is rife with potential problems. Much of our natural gas comes through the process of hydraulic fracturing – aka “fracking.” In this process, companies drill boreholes deep into the earth and inject liquid into subterranean rock at very high pressure. This forces open rock fissures and releases gas from within the rock or reservoirs below.

In particular, fracking can contaminate groundwater supplies if it's not done properly.

Fracked gas is [typically found pretty deep in the earth](#) – much further down than the water table. But the boreholes carrying the gas back up to the surface travel straight through the water-bearing rocks, called aquifers, from which many of us get our water. The injected fracking fluid often contains dangerous chemicals that no one would want to drink – and if the borehole is not properly cased, those chemicals can escape into groundwater.

And it's important to remember that natural gas development is itself far from pollution-free.

“Some areas where drilling occurs have experienced increases in concentrations of hazardous air pollutants and two of the six criteria pollutants — particulate matter and ozone plus its precursors — regulated by the EPA because of their harmful effects on health and the environment,” [the Union of Concerned Scientists reports](#). “Exposure to elevated levels of these air pollutants can lead to adverse health outcomes, including respiratory symptoms, cardiovascular disease, and cancer.”

Exposure to these pollutants can be particularly damaging to very young children.

“Given the profound sensitivity of the developing brain and the central nervous system, it is very reasonable to conclude that young children who experience frequent exposure to these pollutants are at particularly high risk for chronic neurological problems and disease,” the Center for Environmental Health's Ellen Webb, a researcher on the neurological and neurodevelopmental effects of chemicals linked to unconventional oil and gas operations, [told the Guardian last year](#).

>> [Fossil Fuels Will Not Bring Appalachia Back To Life – But Tech And Government Jobs Could](#)
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Natural gas is a bridge to nowhere.

The conversation over natural gas' value as a “bridge fuel” is a fraught one. Supporters claim that it's a better alternative to coal that will carry us until renewables like wind and solar can fully power the grid. But let us ask you this: Would you take a bridge at all if there was no river, ravine, or other obstacle you had to cross?

That's to say, we *already have* zero or near-zero carbon-emitting energy sources that are preferable to coal, oil, *and* natural gas. Residential and utility-scale wind, solar, and geothermal energy are up and running and



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getting better every day – and they're increasingly cost-competitive with energy produced by fossil fuels. *Right now.*

[Yale Climate Connections makes the stakes plain](#): “Although it might not be practical to replace all coal plants with renewables immediately, it's definitely possible to do so in the next decade if renewables continue to fall in price.”

The article goes on to highlight the real danger of the bridge fuel fallacy: “If we replace coal with gas today, we've sunk costs into new gas infrastructure that we might be loath to replace a few years later with renewables. In this way, a gas bridge could delay the widespread adoption of renewables.”

If natural gas expansion comes at the expense of renewables, the greenhouse gas emissions threat to our climate continues. And there's already plenty of evidence that overemphasizing gas really does [siphon investment away](#) from renewable energy sources that produce truly clean power.

The bottom line is that natural gas is still a fossil fuel, and simply shifting from coal to it [won't keep the US on track](#) to meet its emissions reduction goals, even if methane leakages are reined in.

So rather than make an unnecessary, temporary wholesale switch to natural gas, the smarter tactic would be to phase out coal while moving straight to utility-scale renewable energy – something that is totally doable.

>> **Learn more:** [Pricing Pollution: Campaign Toolkit](#) <<

Listen, we get it: Fossil fuels helped power the Industrial Revolution and helped shape the past two centuries. But they're just that – the energy of the past. With new technologies like wind, solar, and advanced batteries in our hands, we can power today and tomorrow with clean,

reliable energy that doesn't harm our health and destroy our planet.

It's just that simple.

Are you ready to learn more about fossil fuels and their impact on our planet? [Download Climate 101 Fact Sheet: Fossil Fuels now.](#)

In this free fact sheet, we outline the basics of fossil fuels like natural gas in plain language. In just two pages, we answer these questions:

- What exactly are fossil fuels?
- How are these sources of energy impacting our climate?
- How are coal, natural gas, and oil different from each other?
- Why should we make the switch to clean, renewable energy?

[The climate is changing, but these facts don't. Download our free fossil fuel fact sheet today.](#)