

Plastics and the Climate Crisis: What You Need to Know

PLASTICS CAST A LONG CLIMATE SHADOW



Plastics are extremely energy and emissions intensive to produce and dispose of, creating demand for new oil and gas production. In fact, **99 percent** of all plastics are made from fossil fuels. (SOURCE: CIEL)



Up to **5 tons of greenhouse gases, including CO₂ and methane**, are emitted per ton of plastic. GHGs are produced at every stage in the plastics lifecycle. The extraction of feedstocks and production, use, and disposal of plastics are responsible for 3-4% of **global GHG emissions** as well as significant local air and water pollution. (SOURCES: Overseas Development Institute and Zheng and Suh)



Today, about 11 million metric tons of plastic enters the ocean each year, and that number is projected to **triple by 2040**. The planned expansion in production will undermine efforts to reduce plastic consumption, improve waste collection, and reverse the plastics crisis. (SOURCE: Pew Trusts)



The density of refining, plastic production, and waste incineration facilities in poorer, often coastal, communities can result in significant air and water pollution with severe human health consequences, including asthma, cancers, endocrine disruption, developmental disorders, and heart disease. Marine debris exacerbates **climate-driven stressors** to these communities such as sea level rise and flooding and loss of subsistence livelihoods. (SOURCE: CIEL)

THE FOSSIL FUEL INDUSTRY IS DOUBLING DOWN

Plastic production is boosting fossil fuel's bottom line. Faced with long-term declining demand for fossil fuels, oil and gas companies are investing more in petrochemicals because they see plastics as a growing source of demand for their products. Petrochemicals, driven by plastic production, are projected to be the largest source (**60 percent**) of oil demand growth through 2030, and plastics are estimated to make up **20 percent** of oil demand by 2050. (SOURCES: IEA and Ellen MacArthur Foundation)

Fossil fuels – and thus plastics – are buoyed by massive government subsidies. The International Monetary Fund (IMF) estimates that fossil fuels globally received explicit subsidies of **\$600 billion** in 2021 alone. U.S. **federal subsidies** added billions to the value of major new unconventional oil and gas projects in the U.S. over the past decade, fueling over **\$200 billion** of private sector investment in U.S. petrochemical production in that time. (SOURCES: SEI, IMF, and American Chemistry Council)

Fossil fuel subsidies are slowing the clean energy transition. Subsidies help lock in unsustainable levels of oil and gas and plastic production. In the U.S. alone, the Biden-Harris Administration budget estimates that the elimination of fossil fuel tax subsidies could raise over **\$120 billion** over 10 years – funds that could go toward renewable energy instead (SOURCE: White House).

Six Steps to Address the Plastics Climate Crisis

HOW TO ADDRESS THE PLASTICS CLIMATE CRISIS – OUR VIEW

1

End fossil fuel subsidies. We can't continue to invest in fossil fuels and limit global warming at the same time. The International Energy Association (IEA) has concluded that [achieving net zero](#) requires that no new oil and gas fields be developed. International organizations – including the [IMF](#), [OECD](#), and [G20](#) – have called for an end to subsidies for fossil fuel producers as a critical step toward phase out. Eliminating these subsidies would have dual benefits for the ocean: accelerating the transition to low-carbon fuels and renewable energy while making virgin plastic production less financially attractive, enabling recycled plastic and circular business models to compete.

2

Include plastics in climate commitments. Companies, investors, and countries cannot make credible climate commitments that don't include significant reductions in virgin, fossil fuel-based plastic production and use. Without reductions, demand for oil and gas and sources of greenhouse gas emissions will be locked in for decades to come. Commitments must include full disclosure of emissions across the full plastics lifecycle, disclosure of emerging risks, and meaningful planning for the transition away from fossil fuels.

3

Reduce pollution and emissions from plastic production. Plastic production facilities are a major source of greenhouse gases and other air and water pollutants. (Formosa's planned new complex in St. James Parrish, Louisiana, has the potential to emit over [13.6 million tons](#) of greenhouse gases per year, more than most U.S. coal-fired power plants, along with [significant amounts](#) of harmful air pollution). Policymakers need to hold companies accountable for this pollution, and companies must commit to clean up their emissions. (SOURCES: Scientific American and EIP)

4

Invest in the circular economy to achieve low-cost emissions reductions. Research shows that increasing the circular use of plastics is one of the most [cost-effective](#) ways to reduce emissions from the industrial sector. more investment like this is needed to enable the transition away from fossil fuel-based plastics. (SOURCE: Energy Transitions Commission)

5

Accountability across the plastics lifecycle. Industry needs to pay its fair share for the negative impacts of plastic – from the wellhead to the plastic bag on the beach – through policies like extended producer responsibility (EPR) or fees on virgin plastic.

6

Support a just transition. The transition away from plastics, like that from fossil fuels, must follow principles of a just transition, ensuring that people who currently depend on the industry receive the support, social protection, and investments they need to thrive in a zero-carbon future, and that the costs and benefits of climate action are distributed equitably.

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