

Decarbonizing Our Future

The Role of Finance and Subsidies for a Sustainable World

By: Alyssa Ng, Center for Earth Ethics (ang@centerforearthethics.org)



Introduction

Humans have altered the earth's ecosystems and climate so drastically that scientists have coined the term for a new epoch in earth's history: the "Anthropocene." One framework for understanding the challenges of our time is what the United Nations calls the "[triple planetary crisis](#)" of pollution, climate change, and biodiversity loss. Since these crises are interconnected, solutions like the phaseout of fossil fuels can target them simultaneously. Fossil fuel use underpins all three crises, because it leads to the emission of hazardous

pollutants, destruction of lands and water supplies, unpredictable and unprecedented weather, and climate variability.

[Fossil fuels account for more than 75% of global greenhouse gas emissions](#) and are the largest contributor to climate change. Without freeing ourselves from the stranglehold of fossil fuels on our economies and our lives, we will be unable to mitigate climate change to an extent where the world can adapt. The facts demand we re-evaluate the practical and moral constitution of our economies, and to interrogate the modes of being we have become accustomed to. First and foremost is taking a critical look at the models of grants, loans, and subsidies that facilitate the fossil fuel economy, and how they need to be reorganized to support decarbonization and renewable energy.

Effects of Climate Change

The [2023 IPCC synthesis report](#) states with high confidence that “human activities, principally through emissions of greenhouse gasses, have unequivocally caused global warming.” Fossil fuel induced climate change is responsible for a broad spectrum of disasters ranging from [prolonged droughts to powerful rainfall that inundates cities](#). There is no aspect of life that climate change does not affect; food production, job opportunities, and [the transmission of pathogens](#). Research of a potential collapse of ocean systems called [AMOC](#) and the greening of the ocean are still not fully comprehended, yet are certain that these are influenced by greenhouse gas emissions. It is no coincidence that the world endured [its hottest July on record](#) this year while oil [companies rolled back their climate pledges and reached historic high profits](#).

Why Mitigation – Why Not Adaptation?

Combating climate change can be done through mitigation and adaptation. Mitigation refers to the act of reducing and phasing out the activity that is causing harm, while adaptation requires measures to adjust our lives to the changing conditions. Adaptation, such as planting mangroves to protect against storm surge, is beneficial because it helps on the short-term scale. Through adaptation measures, areas can prepare for precarious and projected conditions. However, in this context, time cannot be viewed as an infinite resource because eventually, there is a tipping point where the earth incurs irreversible damage that humans will not be able to adapt to. In some ecosystems and regions, [limits to adaptation have already been reached](#).

Phasing out fossil fuels is the most urgent and impactful mitigation strategy that can prevent the earth from crossing a deadly threshold. Since the accelerated pace of climate change stems from anthropogenic burning of fossil fuels, there will be little progress in limiting the global average temperature rise to 1.5°C or 2°C as agreed on in the Paris Agreement without systemic change.

Other mitigation measures, like conserving water, are helpful, but do not eliminate the root of the problem. Carbon dioxide removal and carbon capture and storage technology have

been emphasized as functional strategies because they absorb carbon from the atmosphere and prevent it from entering the atmosphere by capturing it at emission.

Although these are theoretically useful, they cannot [be deployed at a rate or scale robust enough](#) to make a significant impact, especially if countries and companies use them to disguise their continued polluting. Focusing solely on adaptation – or on inefficient or unproven technologies – can create a moral hazard, meaning that these activities can actually deter polluters from reducing their emissions and prolong the fossil fuel era. By doing so, the opportunity to phase fossil fuels out will pass. Therefore, the only way to successfully achieve the 1.5°C goal is to rapidly transition away from fossil fuels and toward clean energy.

Finance

Currently, economic structures favor fossil fuels. In 2022, global fossil fuel consumption subsidies alone are estimated to be more than [US\\$1 trillion, not accounting for production subsidies](#). With financing from multilateral development banks (MDBs), governments artificially lower fossil fuel costs to create the illusion that they are cost-competitive with clean energy. Public funds pay for the subsidies. Not only do these subsidies prop up the fossil fuel industry, helping them make record profits, but their total closely rivals the [amount invested in clean energy](#). It is fundamental to eliminate subsidies and incentives that encourage pollution and redirect them toward the clean energy transition.

MDBs fund fossil fuel projects under the guise of sustainable development, but these projects actually accomplish the exact opposite. The World Bank, the most renowned and largest MDB, has notoriously given [US\\$14.8 billion](#) in direct investment for fossil fuel projects and policies between 2016 and 2021. The total amount of investment is likely to be much higher because of how they are channeled through financial intermediaries like commercial banks. The [world's 60 largest commercial and investment banks funneled more than US\\$5.5 trillion](#) between 2016 and 2022. Banks lend or underwrite for fossil fuel development and can act as financial advisors. Although some banks established policies to not lend to specific kinds of fossil fuel projects, they are still willing to lend to companies that fund those projects.

With the upcoming UN Framework Convention on Climate Change (UNFCCC) COP in Dubai, it is imperative that sincere commitments are made to phase out fossil fuels – not just capture their emissions. This year's COP is hosted by the United Arab Emirates (UAE), one of the world's largest oil producers. The state-owned company, ADNOC, whose CEO is also the COP28 president, plans to grow its oil production to five million barrels per day by 2025, and the MDB that UAE is a part of, the Islamic Development Bank, has been [requested to end support for fossil fuels and prioritize clean energy investments by the UN Secretary General](#). The Islamic Development Bank committed at least [US\\$1.77 billion](#) to support fossil fuel projects, especially for oil and gas, through loans, grants, and guarantees between 2020 and 2021. Comparatively, at least US\$229.80 million was spent supporting

clean energy projects during that same time period. Fossil fuel financing is pervasive across MDBs.

Ten [MDBs, including the Islamic Development Bank and the World Bank, agreed to align new financing with the goals set in the Paris Agreement](#). Each MDB will need to design their own methodologies for evaluating investment proposals. The investment will need to align with the country's nationally determined contribution (NDC), a troubling loophole because NDCs may not be Paris-aligned. MDBs also must implement exclusion policies for both direct and indirect fossil fuel financing.

Alternatives

The clean energy transition has begun, but it needs further support. The global price of clean energy has dropped significantly, making it more accessible. Utility-scale solar photovoltaics and onshore wind are the [cheapest options](#) for new electricity generation in a majority of countries. In the US, [renewable energy plants are cheaper to operate compared with all but one existing coal plant](#). As more clean energy investments expand and policy changes to align with the 1.5°C temperature goal, fossil fuel projects will become stranded assets. One reason why these renewable energy plants are cheaper is the Inflation Reduction Act (IRA) passed by the Biden Administration in 2022. The IRA provides US\$369 billion in incentives for energy and climate-related programs in the form of grants, tax credits, and rebates, with the possibility of deploying even more incentives through tax credits. These incentives can assist a variety of stakeholders – including businesses, farmers, and places of worship – with energy efficiency upgrades, job creation, and environmental justice initiatives. Early modeling projects that the act will bring the US within [0.5 billion tons of its 2030 climate target](#). Since the IRA passed, climate spending has grown dramatically, without sacrificing economic prosperity.

Ways to restructure fossil fuel subsidies are country specific because barriers to transformation are heavily influenced by specific political landscapes. Generally, [closing loopholes in national policies and international agreements, improving transparency of public investment \(either to fossil fuels or for the development of clean energy\), and the increasing accountability of global commitments on shifting public support from fossil fuels to clean energy](#) are helpful. Once harmful subsidies are identified, funds can be reallocated toward clean energy as well as social protection mechanisms to ensure that the transition is just and equitable.

As an example, Indonesia has implemented a series of reforms for electricity and transport costs. [In 2014, the country introduced automatic monthly price adjustments to reduce subsidy costs for electricity](#). (Indonesia implemented similar reforms in 2015 for gasoline and diesel, saving trillions of rupiahs.) The savings were redirected to social and welfare programs and infrastructure projects. Significant fossil fuel subsidies were later reintegrated into the government budget, amounting to IDR 206 trillion in 2020. [If the government decided to reform these subsidies again, it could use the savings to incentivize](#)

[energy efficiency, develop reliable energy access, and dismantle other barriers to clean energy.](#)

Finding such examples of ambitious fossil fuel subsidy reforms remains challenging, despite pledges by groups like the G7 and G20. This underscores the need to fill knowledge gaps on reform strategies and greater political will to implement these efforts.

Moral and Ethical Clarity

Decarbonizing is not only beneficial economically, but also a moral and ethical imperative. The fossil fuel industry has manipulated consumers since the 1960s. Their own investigations found gas, oil, and coal emissions to be destructive. Now that the effects of climate change are visible everywhere, this deceit has evolved into greenwashing. “Greenwashing” describes the corporate practice of making unsubstantiated claims to deceive customers into believing that the company is acting sustainably. In a 2021 study, [Client Earth found](#) that nine of the biggest fossil fuel companies’ marketing campaigns misrepresented their activities’ environmental impacts, their clean energy investments, and their sustainability targets. The COP28 president’s national oil company, ADNOC, has not reported [its Scope 3 emissions](#), which is one of the largest sources of emissions because it accounts for the emissions generated by consumers when using the product. The omission of critical information is one way fossil fuel companies avoid being held accountable.

In addition to greenwashing, the fossil fuel industry also engages in lobbying to delay the clean energy transition, including the use of political contributions, public disinformation campaigns, and donations to universities. In recent years, there has been an uptick in the number of fossil fuel lobbyists at UNFCCC COPs; more than 600 lobbyists were at last year’s COP. That was [twice the number of delegates from the official UN constituency for indigenous peoples](#) and [more delegates than the collective total of the ten countries most affected by climate change](#). An estimated [\\$125 million](#) was spent by the fossil fuel industry to influence the US federal government, attempting to target issues such as governing methane emissions, oil and gas development on federal land and subsidies for carbon capture.

When new coal plants, gas plants, or plastic manufacturing plants – an extension of the fossil fuel industry – are established, sacrifices are made on all scales. Those who live in the vicinity are subject to polluted waterways, land, and air. Economic prosperity is closely tied to the health and welfare of natural resources. For instance, a farmer with contaminated land and poor soil health will be unable to grow crops and reap a profit. Pollution and climate impacts transcend borders, which was most recently observed when the [Canadian wildfire smoke spread to the United States and imposed hazardous air conditions](#).

Phasing out fossil fuels is not a moral conundrum. Those that are most vulnerable to the climate crisis, low-income and marginalized communities, [are the ones who have contributed the least to emissions](#) and also are the most harmed by the impacts they

create. A prime example of this is the Small Island Developing States, which contributed less than 1% of global GHG emissions, but are increasingly threatened by rising sea levels, powerful storms, and coral bleaching. Not only did the damages to these islands cost [US\\$153 billion from 1970 to 2020](#), they have long-lasting effects on tourism, fishing stocks, and other economic activities.

At COP27 last year, nations agreed to establish a loss-and-damage fund to address the disproportionate, negative consequences inflicted by climate change on developing countries, such as destruction of property or the loss of ecosystem services (a variety of benefits provided by nature for humans like filtering water) due to sea level rise. Costs of loss and damages to developing nations is estimated to range between [US\\$290 billion to US\\$580 billion by 2030](#) – in addition to immeasurable losses to culture and social cohesion. Recommendations on how the fund operates, such as which countries contribute and how the funds will be distributed, will be presented by a committee composed of members from developing and developed countries at COP28.

Faith

“Climate change is more than statistics, it’s more than data points,” says youth climate activist [Vanessa Nakate](#). “It’s more than net-zero targets. It’s about the people, it’s about the people who are being impacted right now.”

Across the world, faith and religious communities are providing care and relief to those impacted by climate change-induced extreme weather events. Whether responding to a hurricane or fire or flood, members of faith communities are often the first to arrive and the last to leave. As caregivers and leaders on the frontlines, faiths provide unique perspectives on the chaos and pain climate change is imposing across the world.

Given their experience on the ground, and the respect bestowed upon them by their communities, faith leaders and faith-based organizations are uniquely positioned to speak authoritatively on the need to phase out fossil fuels and advocate for community-based mitigation and adaptation measures that will support impacted communities.

Faith and religious institutions that own property, land, schools, or other infrastructure have the ability to lead by example. They can invest in renewable energy solutions for their buildings and counter false narratives about climate and energy. Those institutions that hold significant investments can divest from fossil fuels and reinvest in renewable energy.

Women

We must hear the voices of women in all aspects of this work, and women of faith can provide a perspective sometimes absent from larger faith communities. Women have the unique opportunity to:

-
1. As a Faith or Spiritual Leader
 - a. Use your position to share information with your congregation, many of whom may be experiencing mental, emotional, and spiritual distress about climate change. Help provide support and pathways to combat the problem
 - b. Join others in your community to advocate for just transition.
 - c. Work with your leadership to encourage divestment or invest in sustainable energy for your community.
 2. As a Layperson or Person of Faith
 - a. Work with your community's leadership to organize information sessions and support divest and reinvestment campaigns.
 - b. Use your voice to advocate for subsidies that support renewable energy and impacted communities. Provide new insights on the harmful effects of climate change.
 - c. Support and empower women to take more leadership positions in your institutional hierarchy.
 3. As Advocates
 - a. Use your voice to encourage your local communities and governments for reforms of fossil fuel subsidies and investment into clean energy and communities.
 - b. Join organizations or movements to influence policy and decision makers to facilitate decarbonization and direct investments in renewable energy sources.
 - c. Raise awareness about the environmental impacts of fossil fuels and the benefits of renewable energy.
 - d. Participate in policy-making processes, to help shape regulations and incentives that accelerate the transition to clean energy.

Conclusion

All models that limit warming to 1.5°C or 2°C [require massive emission cuts immediately](#). At our current rate of emission, we are likely to miss the 1.5°C threshold by the early 2030s, which will likely impose irreversible changes in the earth that both present and future generations will not be able to adapt to. The continued use of fossil fuels is incompatible with the 1.5°C target and a habitable planet. Every fraction of a degree makes a major difference in the effects we experience and the lives we live. Finance that flows away from fossil fuels and toward stronger climate policies and genuine involvement for all stakeholders will provide synergy toward achieving our goals.