



Policy Brief

Fossil Free for Health Policy Brief: Call for Action, Background, and Detailed Policy Action Agenda

This *Fossil Free for Health* Policy Brief provides context, background, detailed recommendations, and references in support of the *Fossil Free for Health* Policy Action Agenda.

A Call for Action

As individuals and organizations, we represent U.S. health professionals, health workers, health organizations and systems, and health education institutions across the spectrum of public health, environmental health, mental health, and health care. We have dedicated our lives to improving and protecting health. In our work, we already see the terrible impacts of fossil fuel pollution and climate change on our patients and communities, and we fear the steeply mounting toll. **We believe that all people have the right to a healthy environment and a stable climate, now and in the future.**¹

Air pollution from fossil fuels directly causes millions of deaths every year, and fossil fuel emissions are the dominant cause of climate change – the greatest health challenge of this century.² We have an opportunity to reap immediate and ongoing health benefits and save countless lives by moving as rapidly as possible away from dirty, polluting fossil fuels to pollution-free, renewable energy.³ To do so requires that we accelerate our investments in healthy, non-combustion energy, restrict extraction and use of fossil fuels, and support the health of people and communities in this transition.⁴ Yet the fossil fuel industry is working to actively block progress on each of these fronts.⁵ This means that moving forward with necessary speed also requires taking policy actions to limit the power and influence of the fossil fuel industry, as was done with the tobacco industry.

Background

As the health burden of fossil fuels grows and the human impacts of the climate health emergency accelerate, the urgent need for swift action becomes ever clearer. **We are calling for immediate and comprehensive action by all elected officials and policymakers at every level of government, working with communities, civil society, non-profit organizations, the health sector, and businesses, to protect people from health-harming fossil fuels by adopting and implementing the policies in this U.S. *Fossil Free for Health* Policy Action Agenda.**

The Problem

Fossil fuels have created a public health crisis. Air pollution from the combustion of coal, oil, and gas is killing people: globally an estimated 5 to 8.7 million people die prematurely each year due to air pollution from fossil fuel use, including about 350,000 premature deaths each year in the U.S.⁶ Toxic air, water, and soil pollution from mining, fracking, drilling, refining, and burning fossil fuels for energy is also associated with asthma and respiratory disease, heart disease and strokes, lung and other cancers, and effects on brain and neurocognitive function.⁷ Fossil fuel pollution is especially harmful to babies and children, increasing the likelihood of premature births and low birth weight, affecting children's ability to learn, and causing childhood asthma.⁸

The production and burning of fossil fuels is the primary cause of climate change, the greatest threat to human health in the 21st century. Fossil fuels are by far the largest contributor to global climate change, accounting for over 75 percent of global greenhouse gas emissions and nearly 90 percent of all carbon dioxide emissions.⁹ Climate change threatens the stable climatic conditions that have allowed our current economic and societal systems to develop and human civilizations to flourish.¹⁰ Climate change causes extreme heat events, storms, flooding, droughts, and wildfires.¹¹ These in turn cause deaths, injuries, and a myriad of serious illnesses including heart, lung, and kidney disease, vector and water-borne illnesses, adverse impacts on pregnant people and babies, mental health impacts, particularly in youth, as well as forced displacement, shortages of food and water, and related exacerbation of war and conflict.¹²

The United States has outsized responsibility for ending the era of fossil fuels, and has unparalleled economic and political power to do so. The U.S. is the largest historic emitter of greenhouse gasses, the largest producer of oil and gas, and the top oil and gas exporter to other countries.¹³ While recent legislation (i.e. Inflation Reduction Act and Infrastructure Investment and Jobs Act) and market dynamics are driving rapid adoption of healthier energy technologies, global greenhouse gas emissions continue to rise.¹⁴ More robust government policy and investment is required to not only accelerate this transition, but also to rapidly reduce production and export of fossil fuels, allowing us to meet our climate and health goals.¹⁵

The health crises of fossil fuel pollution and climate change affect everyone, but some people and communities are disproportionately affected.¹⁶ People with low incomes, communities of color, Indigenous people and tribal communities, immigrants, communities heavily burdened by pollution, unsheltered people, and fossil fuel and outdoor workers are disproportionately harmed by fossil fuel pollution and climate change, due to historical and ongoing structural inequalities, economic injustice, and racism. Children, pregnant people, older adults, and people with disabilities and chronic illnesses are at high risk of harm from climate change because of greater physiological susceptibility and greater challenges in responding and adapting.

The Opportunity

Ending fossil fuel pollution and greenhouse gas emissions provides an unprecedented opportunity for direct, immediate, and ongoing health benefits.¹⁷ It is increasingly technologically feasible and economically advantageous to move rapidly away from harmful fossil fuel energy and towards pollution-free, renewable energy, such as wind and solar.¹⁸ The window to reduce the harms of climate change is rapidly narrowing, but there is still time to prevent untold deaths and suffering.¹⁹ Each additional tenth of a degree of warming that we avert will reduce damage to millions of people's lives and health.²⁰ Limiting warming to 1.5°C rather than 2°C will save the lives of an estimated 150 million people who would otherwise die as a result of the fossil fuel air pollution causing that additional warming.²¹ The estimated U.S. health costs of air pollution and climate change already far exceed \$800 billion per year.²² Limiting fossil fuel combustion could save roughly 1.4 million lives over the next 20 years from improved air quality, and would yield estimated monetized health benefits in the tens of trillions of dollars this century.²³ **The faster we act, the better off humanity will be.**

Recognizing and fully including the voice, knowledge, and power of the people and communities most affected by fossil fuel pollution and climate change will ensure that these groups are full partners in policy development and decision-making, enabling our response to the climate health emergency to center equity and justice and redress historical health inequities.²⁴

The Fossil Fuel Industry

The fossil fuel industry, its leaders, and the politicians they support are actively impeding efforts to protect our health from fossil fuel pollution and slow or stop progress on climate change.²⁵ Fossil fuel companies like Exxon and Chevron are using their enormous profits to pay politicians, lobbyists, trade associations, and front groups to perpetuate the use of fossil fuels at any cost and to mislead and deceive the public.²⁶ Industry trade associations spent \$2 billion over 10 years to block climate policies; numerous former oil industry lobbyists now work on climate-related issues in high-ranking Congressional staff positions.²⁷

Fossil fuel companies are using the tobacco industry playbook to vigorously fight efforts to address fossil fuel pollution and climate change.²⁸ The fossil fuel industry has known for decades that fossil fuel pollution causes climate change as well as significant health harm.²⁹ They are building on decades of deception to keep the American people from knowing the magnitude and cost of the health and environmental harms they are causing.³⁰ Using the same strategies as the tobacco industry, the fossil fuel industry has spent billions of dollars on a well-documented, coordinated disinformation and lobbying campaign to fight action on climate and air pollution, including outright climate denial, sowing doubt about climate science, greenwashing, supporting false solutions that perpetuate the use of fossil fuels, and raising fear about climate solutions.³¹

The fossil fuel industry is undeserving of credibility or legitimacy. Millions of deaths have been averted since the health community summoned the courage to confront big tobacco to protect our patients.³² It is time for us to summon similar moral clarity and courage to advocate for a future free of fossil fuel pollution. Moving forward on the essential, life-saving energy transition will require actively challenging the social and political license of the fossil fuel industry. It means limiting not only our use of fossil fuels, but also the role of the fossil fuel industry in public decision-making.³³

The policy agenda outlined below provides a roadmap to protect and promote health in the face of the interconnected fossil fuel and climate health crises, requiring policy change to advance the following actions:

- Tell the truth about the health harms of fossil fuels, make polluters pay, and hold the fossil fuel industry accountable for its inequitable harms.
- Stop making the problem worse and accelerate a just transition to an equitable pollution-free, renewable energy economy.
- Protect people and advance healthy, equitable, resilient communities.

Fossil Free for Health: A Policy Action Agenda

Tell the Truth About Fossil Fuels, Make Polluters Pay, and Hold the Fossil Fuel Industry Accountable for its Inequitable Harms

1. Counter Fossil Fuel Industry Disinformation and Tell the Truth about the Harms of Fossil Fuels.

Prior public health campaigns such as the tobacco control campaign demonstrated the power of counter-marketing and media advocacy in effectively eroding public approval of health-harming industries, building demand for health action.³⁴ We must use these proven public health strategies to proactively counter fossil fuel industry disinformation. Eroding the social license and public approval of the fossil fuel industry is a key step in enabling policymakers to take strong action to phase out fossil fuels.

Key policies include:

- a. **Fund, develop, and implement a large-scale coordinated public health counter-marketing and media advocacy campaign**, building on lessons from tobacco control.
- b. **Issue a Surgeon General's public advisory on the health harms of fossil fuels** in order to inform and guide the American public.³⁵
- c. **Enforce and expand rules on misleading fossil fuel industry advertising**, expand liability for deceptive claims, and restrict advertising.³⁶

- d. Provide **health warning labels** on consumer products that expose people to pollution from methane gas and nitrogen oxides (e.g. gas stoves, furnaces, water heaters).³⁷

2. **Make Polluters Pay: Hold fossil fuel companies accountable for the health harms caused by their products.**

Those who cause damage should pay for it.³⁸ The costs of the health, environmental, and climate harms caused by fossil fuel pollution and greenhouse gas emissions are immense – the health costs of air pollution from oil and gas production alone are estimated at \$77 billion annually for the U.S.³⁹ These “externalized” costs are borne by communities, government, households, and businesses, instead of by the fossil fuel industry.⁴⁰ Holding fossil fuel companies accountable will provide financial resources for climate adaptation, compensation for pollution harms, and renewable energy investments.

Key policies include:

- a. **Require the parties responsible for pollution to pay for the full remediation of environmental and health harms associated with pollution from all stages of the coal, oil, and gas chain** – from extraction to combustion – including pollution from currently operating, abandoned, and orphaned fossil fuel, plastics, and petrochemical infrastructure.⁴¹
- b. **Require fossil fuel corporations to pay into a U.S. climate fund** to support climate mitigation, resilience, and emergency response efforts, especially in communities disproportionately affected by fossil fuel pollution and climate change.⁴²
- c. **Ensure that the U.S. meets its pledges to the Green Climate Fund** to enable developing nations to accelerate the energy transition and build climate resilience.⁴³
- d. **Incorporate the full cost of health and environmental harms from fossil fuels, plastic and petrochemical products, and climate change into the social cost of carbon** that is used to quantify the benefits and costs of climate policies.⁴⁴
- e. **Use litigation to hold fossil fuel companies accountable** by bringing public lawsuits on behalf of governments at all levels and supporting legal efforts to hold the fossil fuel industry accountable for the costs to the public for its health, environmental, and climate damages.⁴⁵

Stop Making the Problem Worse and Accelerate a Just Transition to an Equitable Pollution-Free, Renewable Energy Economy

3. Prohibit New and Expanded Fossil Fuel Infrastructure to Stop Making the Problem Worse.

The International Energy Agency and the Intergovernmental Panel on Climate Change (IPCC) have stated that new fossil fuel infrastructure is incompatible with limiting global warming to 1.5°C, the “danger line” above which the risk of catastrophic impacts increases.⁴⁶ New fossil fuel infrastructure locks in harmful fossil fuel carbon emissions and pollution over the lifetime of the infrastructure.⁴⁷ Despite this reality, in 2023, global investments in drilling, exploration, and extraction alone exceeded \$500 billion.⁴⁸ Known fossil fuel reserves contain ten times the amount of carbon we can burn to stay within the 1.5°C climate goal.⁴⁹ Globally, governments are still planning to produce more than double the amount of fossil fuels in 2030 that would be consistent with limiting warming to 1.5°C.⁵⁰ Following the lead of a bloc of Pacific nations, the call for a Fossil Fuel Non-Proliferation Treaty has been supported by the European Parliament, the World Health Organization, and hundreds of health organizations, other nonprofits, and governments at all levels around the world.⁵¹ Meanwhile, between 2005 and 2019, a quarter of U.S. fossil fuel production came from federal lands and waters.⁵² Avoiding new fossil fuel infrastructure will bring innumerable health benefits; for example, electrification of buildings decreases exposure to allergens and pollutants linked with asthma and adverse reproductive outcomes.⁵³ It's time to stop making the problem worse.

Key policies include:

- a. **Halt new and expanded fossil fuel infrastructure**, through policy tools including leasing, permitting, lawsuits, and prohibition and discontinuation of public funding or incentives, including the following types of facilities:
 - i. Upstream, midstream, and downstream production such as oil and gas exploration and drilling; coal mining; pipelines; export terminals; oil and gas fracking and related infrastructure; and petroleum and petrochemical processing and refining facilities;
 - ii. Coal, oil, and gas power plants;
 - iii. Gas transmission and distribution pipelines; and
 - iv. Carbon capture and sequestration (CCS) and related infrastructure (except in the most hard-to-decarbonize industries).
- b. **Prohibit new leases for fossil fuel exploration and extraction** on public lands and waters.
- c. **Establish requirements for all-electric new buildings.**
- d. **Sign the call for a [Fossil Fuel Non-Proliferation Treaty](#).**

4. **Equitably Phase Out Fossil Fuel Extraction, Export, Refining, and Use.**

A rapid, managed, and just decline to near-zero in the production, refining, combustion, and use of fossil fuels is required to reduce air pollution deaths and avert the worst impacts of climate change.⁵⁴ A just and people-centered fossil fuel phase out process requires complementary coordinated federal planning and community-driven planning, leadership, and power, in order to ensure the energy transition minimizes economic disruption and optimizes equitable benefits for affected workers and frontline communities.⁵⁵ The phase out must begin by immediately addressing the sources of greatest pollution such as coal power plants, since coal is the most carbon intensive fossil fuel and air pollution from coal is twice as deadly as that from other fossil fuel combustion.⁵⁶ Phasing out fossil fuel vehicles and appliances would substantially reduce outdoor and indoor air pollution associated with significant adverse health outcomes.⁵⁷ U.S. progress on fossil fuel phase out is undermined by the enormous expansion in gas and oil exports, due in part to the 2015 repeal of a 40-year old ban on exporting crude oil.⁵⁸

Key policies include:

- a. **Develop community plans** through worker- and community-led planning and engagement processes to set timelines, determine phase-out prioritization, and provide investments and support for communities and workers.
- b. **Decommission all coal power plants** as rapidly as possible; follow with a rapid and orderly planned decommissioning of other fossil fuel power plants. Decommissioning must include full remediation of all power plant sites.⁵⁹
- c. **Reinstate ban on crude oil exports** and phase out other fossil fuel exports, including liquefied natural gas (LNG).
- d. **Rapidly phase out existing fossil fuel extraction, refining, production, and transportation** on public lands and waters.
- e. **Rapidly phase out sales of fossil fuel vehicles and appliances** (e.g., stoves, water heaters, furnaces, boilers).⁶⁰

5. **Avoid Approaches that Perpetuate the Extraction and Use of Fossil Fuels.**

The fossil fuel industry and its allies are financially motivated to continue the use of fossil fuels.⁶¹ The industry has lobbied extensively for “false solutions”: policies and technologies that are costly, unproven at scale, and do nothing to address the direct health impacts of fossil fuels, especially in frontline communities.⁶² These distractions and false solutions include carbon offsets, carbon capture and sequestration (CCS), and “blue” hydrogen from methane gas.⁶³ Economists estimate that reaching climate targets through heavy dependence on CCS would cost \$30 trillion more than through renewables, efficiency, and electrification.⁶⁴

In addition, the fossil fuel industry is investing heavily in harmful pivots, increasing production of fossil-fuel based plastics and petrochemicals as a strategy to maintain a robust market for oil and gas.⁶⁵ Yet production, use, recycling, and waste disposal from plastics and petrochemicals release significant greenhouse gas emissions and cause a myriad of environmental and health harms to workers and frontline communities.⁶⁶

Key policies include:

- a. Use governmental policy and investments to **prioritize direct greenhouse gas and toxics emissions reductions**, rather than investing in false solutions.
- b. **End subsidies and support for technologies that prolong the use of fossil fuels**, such as blue hydrogen and CCS.
- c. Commit to a **robust Global Plastics Treaty**.⁶⁷
- d. Rapidly **phase down the production and use of single-use plastics**, including through plastic bag bans and packaging restrictions.
- e. **Restrict expansion of plastics production** facilities and infrastructure.
- f. **Make plastic and petrochemical producers responsible for lifecycle impacts** and end-of-life management through extended producer responsibility laws.

6. End Public Investments and Tax Breaks for Fossil Fuels.

Subsidizing fossil fuels while trying to decarbonize is counterproductive and dangerous. U.S. taxpayers pay tens to hundreds of billions per year to subsidize the fossil fuel industry, while the health costs of air pollution and climate change already exceed \$800 billion per year and are surging.⁶⁸ Public employee pensions are managed and primarily funded by the government; many invest billions of dollars in fossil fuels, funding climate change as well as risking litigation, declining asset value, and stranded assets.⁶⁹

Key policies include:

- a. **End tax breaks that support the fossil fuel industry:** End tax breaks for fossil fuel exploration, development, and production, as well as for new technologies that enhance or prolong fossil fuel extraction, refining, and use.
- b. **Support public sector pension fund divestment** from the fossil fuel industry.
- c. **End policies that enable fossil fuel distributors to levy mandatory fees on customers** to fund industry organizations that advocate against the clean energy transition.⁷⁰

7. Accelerate Adoption of Pollution-Free, Renewable Energy.

Rapid technological advancements and cost reductions make it increasingly affordable to meet growing energy demand while phasing out harmful fossil fuels.⁷¹ By redirecting subsidies from fossil fuels to renewable energy, investing in research and development,

planning for grid transformation, and prioritizing equity and frontline communities, we can move much faster toward pollution-free, renewable energy.⁷²

Key policies include:

- a. **Redirect existing fossil fuel subsidies to invest in pollution-free, renewable energy** – such as wind, solar, and geothermal – and related storage and infrastructure.
- b. **Support adequate financing and comprehensive planning** for the technologies and infrastructure needed to transition away from fossil fuels in the energy sector, including resilient transmission and electrical grid infrastructure, large scale and distributed renewables, microgrids, and battery and other energy storage, with an emphasis on community-owned renewable energy projects.
- c. **Establish timelines for implementation of public procurement and operations policies** that require purchases of energy and vehicles to be fossil free, electrify publicly owned buildings, and move toward fossil-free supply chains.⁷³
- d. **Establish or strengthen ambitious state and federal standards for pollution-free, renewable electricity aligned with achieving the 1.5°C goal**, with binding timelines for implementation.⁷⁴

8. **Accelerate the Transformation of Transportation and Land Use, Buildings and Housing, Industry, Agriculture, and Other Sectors to Reduce Dependence on Fossil Fuels.**

Actions to reduce fossil fuel pollution will bring immediate health and economic benefits to families and communities, by reducing diseases caused by air pollution and increasing access to healthier transportation and housing options.⁷⁵ Replacing gas with electric appliances in California homes alone would produce \$3.5 billion in annual health benefits from cleaner air; weatherization saves hundreds of dollars for households each year.⁷⁶ Agriculture is responsible for about 11% of U.S. greenhouse gas emissions and significant air and water pollution; our current industrial farm system promotes calorie-dense unhealthy foods.⁷⁷

Key policies include:

- a. **Support transportation pollution reduction** through investments in dense and affordable housing, safe and accessible bicycling and walking networks, convenient and affordable public transportation, electric vehicle (EV) adoption, affordable, accessible EV charging facilities, and non-polluting trucks and ships.⁷⁸
- b. **Strengthen energy efficiency standards and zero emissions targets** across sectors, including for vehicles, appliances, boilers, and other industrial equipment.
- c. **Support zero emission new and existing buildings** through strong building standards and codes and fully funded energy efficiency and weatherization

assistance programs. Fund or incentivize replacement of gas appliances with electric appliances, particularly for retrofitting existing homes and buildings.

- d. **Support the transition to sustainable, regenerative agricultural and forestry practices** that avoid synthetic fossil-fuel based fertilizers and employ electric machinery and non-polluting approaches.

Protect People and Advance Healthy, Equitable, Resilient Communities

9. Protect People from Exposure to Toxic Fossil Fuel Pollution.

People are exposed to fossil fuel pollution at work, in their communities, and in their homes. The best way to protect people from fossil fuel pollution is to rapidly phase out the extraction and use of fossil fuels. In the meantime, we must limit exposures to existing fossil fuel pollution and rebuild healthy community environments and rebuild healthy community environments.

Key policies include:

- a. **Reduce exposures to toxic fossil fuel pollution and safety risks across the fossil fuel life cycle.** Implement and enforce stricter federal and state pollution standards to limit toxic exposures and safety risks, including outdoor and indoor air quality standards, worker health and safety protections, water and soil discharge and pollution standards, standards regulating pipelines and transportation of fossil fuels, hydrogen gas, and carbon dioxide, and consumer product standards. Protect health by eliminating and limiting exposures to fossil fuel pollution through implementation of the full hierarchy of controls, including mandating and enforcing these controls.⁷⁹ This includes creating and implementing evidence-based setbacks or buffer requirements between polluting sources and where people live, play, work, and seek medical care.⁸⁰
- b. **Prioritize actions to reduce exposures to fossil fuel pollution in pollution-burdened communities, particularly those near industry, refining, and ports.** Develop strategies to prevent further exacerbation of cumulative impacts in these communities, for example by prohibiting new or expanded polluting facilities and requiring clean-up and remediation of polluted sites.
- c. **Strengthen requirements for monitoring pollution emissions** across the fossil fuel lifecycle. Require pollution monitors on the fence line of all major sources of air pollution and ensure public access to monitoring data. Require sensors on gas appliances within buildings, with automatic shutoff devices if pollution levels are above health-based standards.
- d. **Invest in reclamation of land from fossil fuel infrastructure and in restoration** and expansion of green space and tree canopy in pollution-burdened communities.⁸¹

10. Support Workers in the Transition to a Fossil-Free Economy.

A sustainable and equitable transition to a fossil-free economy requires that we ensure high quality jobs and inclusive pathways to opportunity and economic mobility for workers who have been left out of today's economy, while protecting workers from major losses in living standards resulting from the energy transition.⁸²

Key policies include:

- a. **Invest in a just transition for workers and communities** adversely impacted by job loss related to the phase out of fossil fuel use, including through workforce development and local hiring, community investment, income replacement, and maintenance of pension and health benefits (including black lung benefits) for displaced workers.⁸³
- b. **Ensure that jobs created in a fossil-free economy pay a living wage and provide family-sustaining benefits** and that employers in the new economy comply with labor and environmental laws, including support for collective bargaining rights and unionization.⁸⁴
- c. **Provide education, training, and economic opportunities** to low-wage workers to ensure family-sustaining jobs in the new energy economy, for example through increased funding to link underinvested communities to quality jobs through apprenticeship programs and a fully funded Civilian Climate Corps.⁸⁵

11. Support Community Health, Redress Health and Racial Inequities, and Protect the Most Vulnerable.

People in every community are affected by the health harms of fossil fuel pollution and the climate crisis. Communities suffering from the legacies of historic disinvestment, marginalization, and environmental racism confront higher rates of pollution burdens, stark health inequities, and limited resources to build healthy communities.⁸⁶ The use of health impact assessments can optimize health benefits and minimize health harms associated with new technologies and infrastructure.⁸⁷

Key policies include:

- a. **Prioritize investments in environmental justice communities**, for example, through implementation of the Justice 40 initiative and community-directed economic development and investment sufficient to remediate past harms and support resilient communities.⁸⁸
- b. **Invest in community-led climate adaptation and resilience.** Ensure that sensitive groups have access to clean air shelters, cooling and heating, and electricity and health care during climate-related extreme events. Ensure protections from disconnection from utility access due to difficulty paying. Prioritize resilience centers in schools and daycare, clinics and hospitals, libraries, and senior and community centers.

- c. Ensure the **costs of transition and of climate change are equitably distributed** and that low income households are not burdened, for example with excessive utility bills or cost of replacing polluting fossil fuel appliances.⁸⁹
- d. **Do not replicate the harms to communities** of the existing fossil fuel economy in transitioning to new systems and technologies. Establish clear mechanisms to ensure that harm is avoided from the build-out and implementation of new and existing technologies, industries, facilities, mines, and infrastructure through: regulation of design and operations; comprehensive health, equity, and cumulative impact assessments; siting restrictions; and strict pollution control and monitoring.⁹⁰

Conclusion

Leading health authorities across the world agree that fossil fuel pollution and resultant climate change is the dominant threat to human health in the 21st century, and that society is not moving at the pace the threat demands. The policy recommendations that comprise this Call to Action provide a roadmap to address the health harms of fossil fuels. We call on local, state, and national leaders to act now to stop fossil fuel pollution, for the health of our communities here in the United States and around the world, and for the health of our children and future generations.

¹ U.N. Office of the High Commissioner for Human Rights, UN Environment Programme, UN Development Programme. What is the right to a healthy environment? Information note. 2022. <https://www.undp.org/sites/g/files/zskgke326/files/2023-01/UNDP-UNEP-UNHCHR-What-is-the-Right-to-a-Healthy-Environment.pdf>.

² Vohra K. et al. Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: results from GEOS-Chem. *Environmental Research*, vol. 195, 2021, 110754. <https://doi.org/10.1016/j.envres.2021.110754>;

United Nations. Causes and effects of climate change. <https://www.un.org/en/climatechange/science/causes-effects-climate-change#:~:text=Fossil%20fuels%20%E2%80%93%20coal%2C%20oil%20and,they%20trap%20the%20sun's%20heat>; Romanello M, et al. The 2023 report of the *Lancet* Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. *Lancet*, vol. 402, 2023. [https://doi.org/10.1016/S0140-6736\(23\)01859-7](https://doi.org/10.1016/S0140-6736(23)01859-7).

³ Shindell D, et al. Temporal and spatial distribution of health, labor, and crop benefits of climate change mitigation in the United States. *PNAS*, vol. 118, 2021. <https://doi.org/10.1073/pnas.210406111>.

⁴ International Renewable Energy Agency. *World Energy Transitions Outlook 2023*. <https://www.irena.org/Publications/2023/Jun/World-Energy-Transitions-Outlook-2023>; IPCC AR6 Synthesis report: climate change 2023. Summary for policymakers. https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf; Global Climate and Health Alliance and Health Care Without Harm (coordinators): COP 28 Open letter on fossil fuels from the Global Medical

and Health Community. 2023. <https://cop28healthletter.com/>; Background note for cop 28 open letter. <https://docs.google.com/document/d/11vrKbqYg70TK9e5ZmsRvwVKvClwEhWTR/edit>.

⁵ Nichols M. UN chief to fossil fuel firms: stop trying to 'knee-cap' climate progress. Reuters. 6/15/2023. <https://www.reuters.com/business/environment/un-chief-fossil-fuel-firms-stop-trying-knee-cap-climate-progress-2023-06-15/>; Pierre J, Neumann, S. How decades of disinformation about fossil fuels halted U.S. climate policy. NPR All Things Considered. October 27, 2021. <https://www.npr.org/2021/10/27/1047583610/once-again-the-u-s-has-failed-to-take-sweeping-climate-action-heres-why>.

⁶ Vohra K, et al. Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: results from GEOS-Chem. Environmental Research, vol. 195, 2021, 110754. <https://doi.org/10.1016/j.envres.2021.110754>; Lelieveld J, et al. Air pollution deaths attributable to fossil fuels: observational and modelling study; BMJ, vol. 383, 2023. <https://doi.org/10.1136/bmj-2023-077784>.

⁷ Global Climate and Health Alliance. Cradle to grave: the health harms of fossil fuel dependence and the case for a just fossil fuel phase out. July 2022. <https://climateandhealthalliance.org/wp-content/uploads/2022/07/Cradle-To-Grave-Fossil-Fuels-Brief.pdf>.

⁸ Perera F. Climate change, fossil fuel pollution and children's health. NEJM, vol. 386, 2022. <https://www.nejm.org/doi/full/10.1056/NEJMra2117706>.

⁹ United Nations. Causes and effects of climate change. <https://www.un.org/en/climatechange/science/causes-effects-climate-change#:~:text=Fossil%20fuels%20%E2%80%93%20coal%2C%20oil%20and,they%20trap%20the%20sun's%20heat>.

¹⁰ Steel D, et al. Climate change and the threat to civilization. PNAS, vol. 119, 2022. <https://doi.org/10.1073/pnas.221052511>.

¹¹ NASA. Extreme weather and climate change. <https://climate.nasa.gov/extreme-weather/#:~:text=As%20Earth's%20climate%20changes%2C%20it,more%20frequent%20and%20more%20intense>.

¹² U.S. Global Change Research Program. Fifth National Climate Assessment. 2023. <https://nca2023.globalchange.gov/>; United Nations. Conflict and climate. 2022. <https://unfccc.int/news/conflict-and-climate#:~:text=The%20evidence%20is%20clear%20that,climate%20change%20into%20conflict%20risks>.

¹³ Bearak M, Popovich N. The world is falling short of its climate goals. Four big emitters show why. New York Times. 11/8/2022. <https://www.nytimes.com/interactive/2022/11/08/climate/cop27-emissions-country-compare.html>;

Clemente, J. The U.S. is becoming the world's largest oil and gas exporter. Forbes. 3/22/2020. <https://www.forbes.com/sites/judeclemente/2020/03/22/the-us-is-becoming-the-worlds-largest-oil-and-natural-gas-exporter/?sh=5642c90b5cb2>; <https://www.eia.gov/todayinenergy/detail.php?id=60622>; Energy Information Agency: Today in Energy. U.S. exports of natural gas set a record high in the first half of 2023. October 4, 2023. <https://www.eia.gov/todayinenergy/detail.php?id=60582>; Egan M. The U.S. is producing more oil than any country in history. CNN. 12/19/2023. <https://www.cnn.com/2023/12/19/business/us-production-oil-reserves-crude/index.html#:~:text=Last%20month%2C%20weekly%20US%20oil,sent%20output%20and%20prices%20crashing>.

¹⁴ US DOE, Office of Policy. Investing in American energy: significant impacts of the Inflation Reduction Act and Bipartisan Infrastructure law on the U.S. energy economy and emissions reductions. August 16, 2023. <https://www.energy.gov/policy/articles/investing-american-energy-significant-impacts-inflation-reduction-act-an>; van Nieuwenhuijzen V, et al. The U.S. Inflation Reduction Act is driving clean-energy investment one year in. Goldman Sachs. 10/31/2023. <https://www.gsam.com/content/gsam/us/en/institutions/market-insights/gsam-insights/perspectives/2023/us-inflation-reduction-act-is-driving-clean-energy-investment-one-year-in.html#:~:text=Significant%20progress%20has%20been%20made,of%20new%20clean%20energy%20capacity>; NOAA Research. Record carbon dioxide emissions impeding progress in meeting climate goals. December 5, 2023. <https://research.noaa.gov/2023/12/05/record-fossil-carbon-dioxide-emissions-impeding-progress-on-meeting-climate-goals-report/>.

-
- ¹⁵ Smeeth L, Haines A. COP 28: Ambitious climate action is needed to protect health. *BMJ*, vol. 383, 2023. <https://www.bmj.com/content/383/bmj.p2938>; U.N. Climate Change. Climate plans remain insufficient: more ambitious action needed now. October 26, 2022. <https://unfccc.int/news/climate-plans-remain-insufficient-more-ambitious-action-needed-now>.
- ¹⁶ U.S. Global Change Research Program. Fifth National Climate Assessment, Chapter 15, Human Health. 2023. <https://nca2023.globalchange.gov/chapter/15/>.
- ¹⁷ World Health Organization Fact Sheet. Ambient air pollution. December 19, 2022. [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health);
Schraufnagel DE, et al. Health benefits of air pollution reduction. *Ann. Amer. Thor. Soc.*, vol. 12, 2019. <https://www.atsjournals.org/doi/10.1513/AnnalsATS.201907-538CME>.
- ¹⁸ Way R, et al. Empirically grounded technology forecasts and the energy transition. *Joule*, vol. 6, 2022. <https://doi.org/10.1016/j.joule.2022.08.009>.
- ¹⁹ Lamboll RD, et al. Assessing the size and uncertainty of remaining carbon budgets. *Nat. Clim. Chang*, vol. 13, 2023. <https://doi.org/10.1038/s41558-023-01848-5>; Kaplan, S. World is on brink of catastrophic warming, U.N. climate change report says. *Washington Post*. March 20, 2023. <https://www.washingtonpost.com/climate-environment/2023/03/20/climate-change-ipcc-report-15/>.
- ²⁰ IPCC Special Report: global warming of 1.5°C. Summary for policy makers. 2018. <https://www.ipcc.ch/sr15/chapter/spm/>.
- ²¹ IPCC Special Report: Global warming of 1.5°C. Summary for policy makers. 2018. <https://www.ipcc.ch/sr15/chapter/spm/>.
- ²² De Alwis D, Limaye VS. The costs of inaction: the economic burden of fossil fuels and climate change on health in the U.S. Medical Society Consortium on Climate and Health, Natural Resources Defence Council, Wisconsin Health Professionals for a Healthy Climate. 2021. <https://www.nrdc.org/sites/default/files/costs-inaction-burden-health-report.pdf>.
- ²³ Shindell D, et al. Temporal and spatial distribution of health, labor, and crop benefits of climate change mitigation in the United States. *PNAS*, vol. 118, 2021. <https://doi.org/10.1073/pnas.210406111>.
- ²⁴ California Environmental Justice Alliance. Community vision is the heart of transformative climate communities. 2022. <https://caleja.org/2017/05/community-vision-is-the-heart-of-transformative-climate-communities>;
Schreuder W, Horlings LG. Transforming places together: transformative community strategies responding to climate change and sustainability challenges. *Clim Action*, vol. 24, 2022. <https://doi.org/10.1007/s44168-022-00024-3>.
- ²⁵ Nichols M. UN chief to fossil fuel firms: stop trying to 'knee-cap' climate progress. *Reuters*. December 15, 2023. <https://www.reuters.com/business/environment/un-chief-fossil-fuel-firms-stop-trying-knee-cap-climate-progress-2023-06-15/>.
- ²⁶ Lakhani N. Fossil fuel firms spent millions on US lawmakers who sponsored anti-protest bills. *The Guardian*. 10/25/2023. <https://www.theguardian.com/us-news/2023/oct/25/fossil-fuel-company-donate-lawmakers-anti-protest-exxon-koch>; Union of Concerned Scientists. How fossil fuel lobbyists used “astroturf” front groups to confuse the public. 2017. <https://www.ucsusa.org/resources/how-fossil-fuel-lobbyists-used-astroturf-front-groups-confuse-public>; Lavalley S. Top oil firms spending millions lobbying to block climate change policies, says report. *The Guardian*. March 21, 2019. <https://www.theguardian.com/business/2019/mar/22/top-oil-firms-spending-millions-lobbying-to-block-climate-change-policies-says-report>.
- ²⁷ Sayki I, Cloutier J. Oil and gas industry spent \$124.4 million on federal lobbying amid record profits in 2022. *Open Secrets*. February 22, 2023. <https://www.opensecrets.org/news/2023/02/oil-and-gas-industry-spent-124-4-million-on-federal-lobbying-amid-record-profits-in-2022/>; Downie C, Brulle R. Big Oil’s trade group allies outspent clean energy groups by a whopping 27x, with billions in ads and lobbying to keep fossil fuels flowing. *The Conversation*. 2/13/2023. [https://theconversation.com/big-oils-trade-group-allies-outspent-clean-energy-groups-by-a-whopping-27x-with-billions-in-ads-and-lobbying-to-keep-fossil-fuels-flowing-198286#:~:text=Big%20Oil's%20trade%20group%20allies,to%20keep%20fossil%20fuels%20flowing](https://theconversation.com/big-oils-trade-group-allies-outspent-clean-energy-groups-by-a-whopping-27x-with-billions-in-ads-and-lobbying-to-keep-fossil-fuels-flowing-198286#:~:text=Big%20Oil's%20trade%20group%20allies,to%20keep%20fossil%20fuels%20flowing;);
Accountable.US. As Republicans take control of the House, Natural Resources Committee and House leadership

hire oil lobbyists to fill top staff positions. 2023. <https://accountable.us/wp-content/uploads/2023/01/20230110-House-Staffers-Revolving-Door-1.pdf>.

²⁸ Supran G, Oreskes N. Rhetoric and frame analysis of ExxonMobil's climate change communications. *One Earth*, vol. 4, 2021. <https://doi.org/10.1016/j.oneear.2021.04.014>.

²⁹ Hall S, Exxon knew about climate change almost 40 years ago. *Scientific American*. October 26, 2015. <https://www.scientificamerican.com/article/exxon-knew-about-climate-change-almost-40-years-ago/>; Millman O. Oil firms knew decades ago fossil fuels posed grave health risks, files reveal. *The Guardian*. March 18, 2021. <https://www.theguardian.com/environment/2021/mar/18/oil-industry-fossil-fuels-air-pollution-documents#:~:text=The%20oil%20industry%20knew%20at,seen%20by%20the%20Guardian%20reveal.>

³⁰ Bonta R. Complaint Filing, Superior Court of State of California: The People of the State of California v. Exxon Mobil Corporation. Office of the Attorney General of California. September 15, 2023. <https://oag.ca.gov/system/files/attachments/press-docs/FINAL%209-15%20COMPLAINT.pdf>.

³¹ Supran G, Oreskes N. Rhetoric and frame analysis of ExxonMobil's climate change communications. *One Earth*, vol. 4, 2021. <https://doi.org/10.1016/j.oneear.2021.04.014>; Supran G, Oreskes N. *Environ. Res. Lett.*, vol. 12, 2017. 10.1088/1748-9326/aa815f. <https://iopscience.iop.org/article/10.1088/1748-9326/aa815f/meta>; Bonta R. Complaint Filing, Superior Court of State of California: The People of the State of California v. Exxon Mobil Corporation. Office of the Attorney General of California. September 15, 2023. <https://oag.ca.gov/system/files/attachments/press-docs/FINAL%209-15%20COMPLAINT.pdf>

³² Roeseler A, Burns D. The quarter that changed the world. *Tobacco Control* 2010;19:i3-i15. https://tobaccocontrol.bmj.com/content/19/Suppl_1/i3.

³³ Marinez C. These fossil fuel industry tactics are fueling democratic backsliding. *American Progress*. December 25, 2023. <https://www.americanprogress.org/article/these-fossil-fuel-industry-tactics-are-fueling-democratic-backsliding/>.

³⁴ Palmedo PC, et al. Preventing noncommunicable diseases? Lessons from tobacco. *Ann Rev Public Health*, vol. 27, 2017. <https://doi.org/10.1146/annurev-publhealth-031816-044303>; Farrelly MC, et al. Getting to the truth: evaluating national tobacco countermarketing campaigns. *Am J Public Health*, vol. 92, 2002. <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.92.6.901>; Roeseler A, Burns D. The quarter that changed the world. *Tobacco Control* 2010;19:i3-i15. https://tobaccocontrol.bmj.com/content/19/Suppl_1/i3.

³⁵ Tumin R. A half-century of Surgeon General warnings. *New York Times*. May 23, 2023. https://www.nytimes.com/2023/05/23/health/surgeon-general-warnings-history.html?unlocked_article_code=1.6Ew.SAUq.4QwuceO8smgX&smid=url-share.

³⁶ Federal Trade Commission. Truth in advertising. <https://www.ftc.gov/news-events/topics/truth-advertising>; Public Health Law Center at Mitchell Hamline School of Law. Restricting Tobacco Advertising. 2022. <https://www.publichealthlawcenter.org/sites/default/files/resources/Restricting-Tobacco-Advertising.pdf>.

³⁷ Wesseler S. Gas stoves pose health risks. Are gas furnaces and other appliances safe to use? *Yale Climate Connections*. March 9, 2023. <https://yaleclimateconnections.org/2023/03/gas-stoves-pose-health-risks-are-gas-furnaces-and-other-appliances-safe-to-use/#:~:text=Gas%20furnaces%20and%20other%20appliances%20can%20cause%20outdoor%20air%20pollution,but%20instead%20circulate%20within%20communities;>

Brooks JR, Ebi KL. Climate change warning labels on gas pumps: the role of public opinion formation in climate change mitigation policies. *Glob Chall.*, vol. 5, 2021. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8495559/>.

³⁸ Grantham Research Institute on Climate Change, London School of Economics and Political Science. What is the polluter pays principle? July 18, 2022. <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-the-polluter-pays-principle/>.

³⁹ Grasso M, Heede R. Time to pay the piper: fossil fuel companies reparations for climate damages. *One Earth*, vol. 6, 2023. <https://www.sciencedirect.com/science/article/pii/S2590332223001987>; Buonocore J, et al. Air pollution and health impacts of oil and gas production in the United States. *Environ. Res.: Health*, vol. 1, 2023. <http://doi.10.1088/2752-5309/acc886>; Shindell D, et al. Temporal and spatial distribution of health, labor, and crop benefits of climate change mitigation in the United States. *PNAS*, vol. 118, 2021. <https://doi.org/10.1073/pnas.210406111>.

-
- ⁴⁰ Rennert K, et al. Comprehensive evidence implies a higher social cost of CO₂. *Nature*, vol. 610, 2022. <https://doi.org/10.1038/s41586-022-05224-9>.
- ⁴¹ Pinto-Bazurco, JF. How to enforce the polluter-pays principle. *International Institute for Sustainable Development*. February 8, 2022. <https://www.iisd.org/articles/polluter-pays-principle>.
- ⁴² United Nations Environment Programme. What you need to know about the COP27 Loss and Damage Fund. November 29, 2022. <https://www.unep.org/news-and-stories/story/what-you-need-know-about-cop27-loss-and-damage-fund>.
- ⁴³ U.S. Department of State. Announcement of pledge to second replenishment of the Green Climate Fund. December 2, 2023. <https://www.state.gov/announcement-of-pledge-to-second-replenishment-of-the-green-climate-fund/#:~:text=The%20United%20States%20announced%20today,2>.
- ⁴⁴ Cromar K, et al. Health impacts of climate change as contained in economic models estimating the social cost of carbon dioxide. *GeoHealth*, vol. 5, 2021. <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2021GH000405>.
- ⁴⁵ Noor D. 'Game changing': spate of US lawsuits calls big oil to account for climate crisis. *The Guardian*. June 7, 2023. <https://www.theguardian.com/us-news/2023/jun/07/climate-crisis-big-oil-lawsuits-constitution>.
- ⁴⁶ International Energy Agency. Net zero by 2050: a roadmap for the energy sector. May 2021. <https://www.iea.org/reports/net-zero-by-2050>; IPCC. Climate change 2022: mitigation of climate change. Summary for policymakers. 2022. https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf.
- ⁴⁷ Strambo C, et al. Q&A: What is carbon lock-in? SEI scientists give a primer. *Stockholm Environment Institute*. May 11, 2022. <https://www.sei.org/features/qa-what-is-carbon-lock-in/>.
- ⁴⁸ International Energy Agency. Oil 2023 executive summary. <https://www.iea.org/reports/oil-2023/executive-summary>.
- ⁴⁹ Allen T, Coffin M. Unburnable carbon: ten years on. *Carbon Tracker*. June 23, 2022. <https://carbontracker.org/reports/unburnable-carbon-ten-years-on/>.
- ⁵⁰ SEI, Climate Analytics, E3G, IISD, and UNEP. The production gap: phasing down or phasing up? 2023. <https://doi.org/10.51414/sei2023.050>.
- ⁵¹ Fossil Fuel Non-Proliferation Treaty Initiative. <https://fossilfueltreaty.org/>.
- ⁵² Ratledge N, et al. Emissions from fossil fuels produced on US federal lands and waters present opportunities for climate mitigation. *Climatic Change*, vol. 171, 2022. <https://doi.org/10.1007/s10584-021-03302-x>.
- ⁵³ RMI. All-electric buildings are healthy buildings. RMI. 2022. https://rmi.org/wp-content/uploads/2022/02/all_electric_buildings_healthy_factsheet.pdf; U.S. Department of Energy, Better buildings. Nothing to sneeze at: health benefits of electrification in multifamily housing (webinar). 2023. <https://betterbuildingsolutioncenter.energy.gov/sites/default/files/transcript/Nothing%20to%20Sneeze%20-%20Transcript%20and%20Additional%20Resources.pdf>.
- ⁵⁴ Editorial: COP28: the science is clear — fossil fuels must go. *Nature*, vol. 624, 2023. <https://doi.org/10.1038/d41586-023-03955-x>.
- ⁵⁵ Vaidya A, et al. Why community power is fundamental to advancing racial and health equity. June 13, 2022. <https://nam.edu/why-community-power-is-fundamental-to-advancing-racial-and-health-equity/>.
- ⁵⁶ International Energy Agency. Coal. 2023. <https://www.iea.org/energy-system/fossil-fuels/coal>; Henneman L, et al. Mortality risk from United States coal electricity generation. *Science*, vol. 382, issue 6673, 941-946. November 23, 2023. <https://www.science.org/doi/10.1126/science.adf4915>.
- ⁵⁷ Larson E, et al. Net-zero America: potential pathways, infrastructure, and impacts: final report. Princeton University. 2021. [https://netzeroamerica.princeton.edu/img/Princeton%20NZA%20FINAL%20REPORT%20SUMMARY%20\(29Oct2021\).pdf](https://netzeroamerica.princeton.edu/img/Princeton%20NZA%20FINAL%20REPORT%20SUMMARY%20(29Oct2021).pdf); Camilleri SF, et al. Air quality, health and equity implications of electrifying heavy-duty vehicles. *Nat Sustain*, vol. 6, 2023. <https://doi.org/10.1038/s41893-023-01219-0>; Goldman J. Natural gas and human health: reheating an old debate. *PSE Healthy Energy*. December 8, 2023. <https://www.psehealthyenergy.org/natural-gas-and-human-health-reheating-an-old-debate/#:~:text=In%20June%20of%202023%2C%20scientists,gas%20can%20also%20produce%20benzene>.

-
- ⁵⁸ U.S. GAO. Crude oil markets: effects of the repeal of the crude oil export ban. October 2020. <https://www.gao.gov/assets/gao-21-118.pdf>.
- ⁵⁹ Malley E. Coal power plant post-retirement options. Power. September 1, 2016. <https://www.powermag.com/coal-power-plant-post-retirement-options/>.
- ⁶⁰ Avery D. These 9 states are banning the sale of gas-powered cars. CNET. September 7, 2023. <https://www.cnet.com/roadshow/news/states-banning-new-gas-powered-cars/>; Szirniks T. The countries phasing out internal combustion engines. Barron's. March 27, 2023. [https://www.barrons.com/news/the-countries-phasing-out-internal-combustion-engines-24e2c3a0#:~:text=Britain%2C%20Israel%20and%20Singapore%20plan,to%20create%20thousands%20of%20jobs](https://www.barrons.com/news/the-countries-phasing-out-internal-combustion-engines-24e2c3a0#:~:text=Britain%2C%20Israel%20and%20Singapore%20plan,to%20create%20thousands%20of%20jobs;); Reuters. San Francisco Bay Area to phase out natural gas heating appliances. March 16, 2023. [https://www.reuters.com/world/us/san-francisco-bay-area-phase-out-natural-gas-heating-appliances-2023-03-16/#:~:text=March%2016%20\(Reuters\)%20%2D%20The,air%20quality%20and%20public%20health](https://www.reuters.com/world/us/san-francisco-bay-area-phase-out-natural-gas-heating-appliances-2023-03-16/#:~:text=March%2016%20(Reuters)%20%2D%20The,air%20quality%20and%20public%20health); European Heat Pump Association. Which countries are scrapping fossil fuel heaters? April 17, 2023. <https://www.ehpa.org/news-and-resources/news/which-countries-are-ending-fossil-fuel-heaters/>
- ⁶¹ Gelles D. Fossil fuels aren't going anywhere. New York Times. October 12, 2023. <https://www.nytimes.com/2023/10/12/climate/fossil-fuels-arent-going-anywhere.html>.
- ⁶² Cloutier J. Carbon capture draws millions in lobbying, billions in federal subsidies. Open Secrets. September 12, 2023. <https://www.opensecrets.org/news/2023/09/carbon-capture-draws-millions-in-lobbying-billions-in-federal-subsidies/>.
- ⁶³ Blake H. The great cash-carbon hustle. The New Yorker. October 16, 2023. <https://www.newyorker.com/magazine/2023/10/23/the-great-cash-for-carbon-hustle>; Jacobson MZ. The health and climate impacts of carbon capture and direct air capture. Energy & Environmental Science, vol. 12, 2019. <https://web.stanford.edu/group/efmh/jacobson/Articles/Other/19-CCS-DAC.pdf>; Howarth RW, Jacobson MZ. How green is blue hydrogen? Energy Sci Eng, vol. 9, 2021. <https://doi.org/10.1002/ese3.956>.
- ⁶⁴ Oil Change International. Carbon capture's publicly funded failure. November 2, 2023. <https://priceofoil.org/2023/11/30/ccs-data/#:~:text=The%20vast%20majority%20of%20existing,2%20to%20an%20EOR%20project>; Bacilieri A, et al. Assessing the relative costs of high-CCS and low-CCS pathways to 1.5 degrees. Working Paper No. 23-08. Oxford Smith School of Enterprise and the Environment. December 12, 2023. <https://www.smithschool.ox.ac.uk/sites/default/files/2023-12/Assessing-the-relative-costs-of-high-CCS-and-low-CCS-pathways-to-1-5-degrees.pdf>.
- ⁶⁵ Brigham K. How the fossil fuel industry is pushing plastics on the world. CNBC. February 1, 2023 (updated). <https://www.cnbc.com/2022/01/29/how-the-fossil-fuel-industry-is-pushing-plastics-on-the-world.html>.
- ⁶⁶ Landrigan PJ, et al. The Minderoo-Monaco Commission on Plastics and Human Health. Ann Glob Health, vol. 21, 2023. <https://annalsofglobalhealth.org/articles/10.5334/aogh.4056>.
- ⁶⁷ U.N. Environment Programme. What you need to know about the plastic treaty negotiations in Paris this week. May 29, 2023. <https://www.unep.org/news-and-stories/story/what-you-need-know-about-plastic-treaty-negotiations-paris-week>.
- ⁶⁸ Environmental and Energy Study Institute. Fossil fuel subsidies: a closer look at tax breaks and societal costs. July 29, 2019. <https://www.eesi.org/papers/view/fact-sheet-fossil-fuel-subsidies-a-closer-look-at-tax-breaks-and-societal-costs>; Whitehouse S. Opening statement for Senate Committee on the Budget hearing: who pays the price: the real cost of fossil fuels. May 3, 2023. <https://www.budget.senate.gov/imo/media/doc/Senator%20Whitehouse%20Opening%20Statement2.pdf>; Reuters. Biden budget to target U.S. fossil fuel subsidies. March 9, 2023. [https://www.reuters.com/business/energy/biden-budget-target-us-fossil-fuel-subsidies-2023-03-09/#:~:text=Calculating%20the%20cost%20of%20U.S.](https://www.reuters.com/business/energy/biden-budget-target-us-fossil-fuel-subsidies-2023-03-09/#:~:text=Calculating%20the%20cost%20of%20U.S;); Alwis D, Limaye VS. The costs of inaction: the economic burden of fossil fuels and climate change on health in the U.S. Medical Society Consortium on Climate and Health, Natural Resources Defense Council, Wisconsin Health Professionals for a Healthy Climate. 2022. <https://www.nrdc.org/sites/default/files/costs-inaction-burden-health-report.pdf>.

⁶⁹ Brown C. Divestment from fossil fuel assets. University of California, Berkeley, Institute for Research on Labor and Employment. <https://irle.berkeley.edu/research-centers/center-for-work-technology-and-society/divestment-from-fossil-fuel-assets/>.

⁷⁰ Tabuchi H. The new soldiers in propane's fight against climate action: television stars. New York Times. January 11, 2023. <https://www.nytimes.com/2023/01/11/climate/climate-propane-influence-campaign.html>; Phillips A. Heat pumps are defying Maine's winters and oil industry pushback. Washington Post. February 7, 2023. <https://www.washingtonpost.com/climate-environment/2023/02/07/maine-gas-industry-heat-pumps/>.

⁷¹ International Energy Agency. Renewable energy market update. June 2023. <https://www.iea.org/reports/renewable-energy-market-update-june-2023/executive-summary>; International Energy Agency. Tracking clean energy progress 2023: analysis. IEA. <https://www.iea.org/reports/tracking-clean-energy-progress-2023>.

⁷² Damania R, et al. Detox development: repurposing environmentally harmful subsidies. World Bank. June 15, 2023. <https://www.worldbank.org/en/topic/climatechange/publication/detox-development>.

⁷³ OED. Green public procurement. Organisation for Economic Co-operation and Development. <https://www.oecd.org/gov/public-procurement/green/>.

⁷⁴ Barbose G. U.S. state renewables portfolio & clean electricity standards: 2023 status update. Lawrence Berkeley National Lab. June 2023. <https://emp.lbl.gov/publications/us-state-renewables-portfolio-clean>; Deschenes O. Causal effects of renewable portfolio standards on renewable investments and generation: the role of heterogeneity and dynamics. National Bureau of Economic Research. Working Paper 31568. August 2023. <https://www.nber.org/papers/w31568>; Energy Information Agency. Renewable energy explained. Portfolio Standards. EIA. <https://www.eia.gov/energyexplained/renewable-sources/portfolio-standards.php>.

⁷⁵ Centers for Disease Control and Prevention. Improving health through transportation policy. CDC Division of Nutrition, Physical Activity, and Obesity. August 14, 2021. <https://www.cdc.gov/transportation/index.html>; Centers for Disease Control and Prevention. A healthy home for everyone. CDC National Center for Environmental Health. https://www.cdc.gov/nceh/lead/docs/publications/final_companion_piece.pdf.

⁷⁶ Zhu Y, et al. Effects of residential gas appliances on indoor and outdoor air quality and public health in California. UCLA Fielding School of Public Health and Sierra Club. April 2020. <https://coeh.ph.ucla.edu/wp-content/uploads/2023/01/Effects-of-Residential-Gas-Appliances-on-Indoor-and-Outdoor-Air-Quality-and-Public-Health-in-California.pdf>; U.S. Department of Energy. Weatherization Assistance Program. January 1, 2021. https://www.energy.gov/sites/default/files/2021/01/f82/WAP-fact-sheet_2021_0.pdf.

⁷⁷ Patel L, Rudolph L. Supporting climate, health, and equity under the Farm Bill. N Engl J Med, vol. 389, October 26, 2023. <https://www.nejm.org/doi/full/10.1056/NEJMp2307507>.

⁷⁸ The U.S. National Blueprint for Transportation Decarbonization: a joint strategy to transform transportation. U.S. Departments of Energy, Transportation, Housing, Environmental Protection Agency. January 2023. <https://www.energy.gov/sites/default/files/2023-01/the-us-national-blueprint-for-transportation-decarbonization.pdf>.

⁷⁹ Centers for Disease Control and Prevention. Hierarchy of controls. CDC National Institute for Occupational Safety and Health. 2021. <https://www.cdc.gov/niosh/learning/safetyculturehc/module-3/2.html>.

⁸⁰ Shonkoff S, Morello-Frosch R for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel. Response to CalGEM questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel. October 1, 2021. https://www.conservation.ca.gov/calgem/Documents/public-health/Public%20Health%20Panel%20Responses_FINAL%20ADA.pdf.

⁸¹ Loures L, Panagopoulos, T. Sustainable reclamation of industrial areas in urban landscapes. WIT Transactions on Ecology and the Environment, vol. 10, 2007. <https://www.witpress.com/elibrary/wit-transactions-on-ecology-and-the-environment/102/17314>;

Woodward A, et al. Trees, climate change, and health: an urban planning, greening and implementation perspective. Int J Environ Res Public Health, vol. 20, 2023. [10.3390/ijerph20186798](https://doi.org/10.3390/ijerph20186798).

⁸² Pollin R. Fossil fuel industry phase-out and just transition: designing policies to protect workers' living standards. JI of Human Develop and Capabilities, vol. 24, 2023. <https://doi.org/10.1080/19452829.2023.2241840>; Muro M, et

al. Advancing inclusion through clean energy jobs. Brookings Metropolitan Policy Program. April 2019. https://www.brookings.edu/wp-content/uploads/2019/04/2019.04_metro_Clean-Energy-Jobs_Report_Muro-Tomer-Shivaran-Kane.pdf.

⁸³ Overview of federal policies and programs for just transition. Just Transition Fund. 2024.

<https://justtransitionfund.org/resources/federal-policies-and-programs-for-just-transition/>.

⁸⁴ U.S. Department of Energy, Office of Policy. Good jobs with good pay and benefits are key to building the clean energy future. September 4, 2023. <https://www.energy.gov/policy/articles/good-jobs-good-pay-and-benefits-are-key-building-clean-energy-future>.

⁸⁵ Johnson C, et al. More federal action is needed to promote equity and growth in the green workforce.

The Center for Law and Society. October 7, 2022. <https://www.clasp.org/blog/useer-green-workforce/>; Marcacci S.

The American Climate Corps will put thousands to work building a stronger country. Forbes. September 24, 2023.

<https://www.forbes.com/sites/energyinnovation/2023/09/24/the-american-climate-corps-will-put-thousands-to-work-building-a-stronger-country/?sh=697a06617cb4>.

⁸⁶ Mathiarasan S, Hüls A. Impact of environmental injustice on children’s health—interaction between air pollution and socioeconomic status. *Int J Environ Res Public Health*, vol. 18, 2021. [10.3390/ijerph18020795](https://doi.org/10.3390/ijerph18020795); Bullard R. The quest for environmental and climate justice (video). Horace M. Albright Lecture in Conservation, University of California, Berkeley. November 1, 2023. <https://nature.berkeley.edu/albright/2023/robert-bullard>.

⁸⁷ National Research Council. Improving health in the United States: the role of health impact assessment. National Academies Press. 2011. <https://doi.org/10.17226/13229>.

⁸⁸ The White House. Justice 40: a whole of government initiative.

<https://www.whitehouse.gov/environmentaljustice/justice40/>.

⁸⁹ C40 Cities Climate Leadership Group, C40 Knowledge Hub. Policy brief: 10 ways cities can tackle energy security and energy poverty. June 2022. https://www.c40knowledgehub.org/s/article/10-ways-cities-can-tackle-energy-security-and-energy-poverty?language=en_US.

⁹⁰ Buckley L, et al. Public health research roadmap on emerging electricity systems. California Energy Commission. November 2017. <https://www.energy.ca.gov/sites/default/files/2021-06/CEC-500-2017-035.pdf>;

Kamaarz T, et al. Governing the dark side of renewable energy: a typology of global displacements. *Energy Research & Social Science*, vol. 74, 2021. <https://doi.org/10.1016/j.erss.2020.101902>.