FOUNDATION FOR DEFENSE OF DEMOCRACIES

Blackout

International Energy Policies Threaten U.S. National Security

Professor Brenda Shaffer

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Key Takeaways

Energy is an essential pillar of American national security. Prevailing international energy policies generate threats to U.S. national security. The United Nations, Europe, and other American allies are promoting energy policies that weaken U.S. allies and strengthen U.S. adversaries.

Specifically, these energy policies increase the power of the new alliance among China, Russia, Iran, and North Korea at the expense of the West. Through their climate and energy policies, the United States, Europe, and other allies are in the process of replacing affordable and reliable electricity with expensive and unreliable power. Meanwhile, China and its allies continue to produce cheaper and more reliable electricity, giving them an edge in manufacturing and on the national security front. China especially benefits from international climate campaigns, particularly against the production and use of natural gas.

The United States is the leading funder of the international organizations that advocate these hazardous energy policies: the United Nations, the World Bank, and the International Energy Agency. While not an objective, scientific institution, the United Nations publishes the most influential reports on climate change. The United Nations is an inherently political body, and its climate activity reflects politics. Thus, it advocates diverting trillions of dollars from the West to China and the Global South to promote the West's climate policies and adopt renewable energy. The Biden administration transferred $9.5 billion to the United Nations for diversion to the Global South.[1] The Trump administration's withdrawal from the United Nations' Paris Climate Agreement will not make a dent in the United Nations' climate activity. The new administration must identify all routes of funding from the U.S. government to UN climate activity and curtail them. If the U.S. government wants to provide aid to developing countries to help increase their energy capacity, it should do so directly and not via the United Nations or the World Bank.

There is ample support for UN-backed energy and climate policies because most American allies, leading international organizations, and many in the wider American public are operating under the false assumption that an energy transition from fossil fuels to renewable energy is taking place and thus there is no longer a need to ensure long-term access to stable and affordable energy from fossil fuels. However, there are no signs of an imminent energy transition, so basing policies on this assumption is dangerous. Fossil fuels provide for 83 percent of American energy consumption and close to 82 percent of global energy.[2] Meanwhile, UN reports are used to justify legal challenges to fossil fuel development and export and commercial discrimination against fossil fuel companies.

In 2021, the Biden administration ordered all U.S. government agencies and embassies to refrain from engaging in any promotion of fossil fuels, including policy discussions with foreign partners to address energy security. Canceling this order should be a priority for the administration, followed quickly by new guidance and policies on the role of energy in U.S. foreign policy. On the legislative front, it is time to eliminate the massive subsidies for renewable electricity, electric vehicles, and electrification under the Inflation Reduction Act (IRA).

While the U.S. government needs access to reliable energy data, the International Energy Agency (IEA) and to a certain degree the U.S. Energy Information Administration (EIA) — the U.S. Department of Energy's research unit — have become climate policy and renewable energy advocacy organizations that report

1. The White House, Press Release, "Fact Sheet: Biden-Harris Administration Leverages Historic U.S. Climate Leadership at Home and Abroad to Urge Countries to Accelerate Global Climate Action at the 29th U.N. Climate Change Conference (COP29)," November 12, 2024. (https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2023/12/02/fact-sheet-biden-harris-administration-leverages-historic-u-s-climate-leadership-at-home-and-abroad-to-urge-countries-to-accelerate-global-climate-action-at-u-n-climate-conference-cop28)
2. "Statistical Review of World Energy," *Energy Institute*, June 20, 2024. (https://www.energyinst.org/statistical-review)

mostly scenario results instead of actual data, distorting current trends. Both the IEA and EIA should return to their mandates or lose U.S. government funding.

Meanwhile, Group of Seven ([G7] — Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) energy policies, through denial of public finance to fossil fuel projects, are fueling global energy poverty, increasing the likelihood of political instability in several countries, and creating opportunities for China to increase its influence in the developing world.[3] Most developing countries are dependent on public finance for electricity projects, so the G7 ban in 2021 meant either an end to such financing (and thus energy poverty) or accepting loans from China. The United States should resume this financing and prod the G7 and the World Bank to do the same. The administration should also conduct an inquiry into the World Bank's massive ($41 billion) misplacement of climate funds. The new administration should adopt a "fuel neutral" approach in its foreign aid and public finance, with no deference to either renewable energy or fossil fuels.

The administration should prepare to confront interventions by major investors, banks,[4] and the insurance industry,[5] along with nongovernmental organization (NGO) lawfare, which can inhibit the production of fossil fuels. Additionally, the administration's National Security Strategy and National Defense Strategy should address energy security as it relates to the fuels that are in use today — chiefly fossil fuels. In the 2022 U.S. National Security Strategy, the single section on energy security focuses on transitioning away from fossil fuels.[6]

Finally, the United States needs to address increasing threats to its domestic energy supply and to energy supplies used to power the U.S. military ("operational energy"). Whereas, in past wars, the United States benefited from uninhibited energy supplies, in the future, U.S. adversaries plan to disrupt these supplies and likely can do so. The state of U.S. and global energy security directly affects America's ability to fuel its military operations since the U.S. military's energy supplies run on civilian supply lines, both at home and globally. Accordingly, the U.S. military should focus on using the best fuels available for operational readiness and lethality and not on promoting non-military goals through energy policies. Likewise, the Department of Defense (DOD) should study potential threats by U.S. adversaries to operational energy supplies and address these threats.

"Whereas, in past wars, the United States benefitted from uninhibited energy supplies, in the future, U.S. adversaries plan to disrupt these supplies and likely can do so."

The future of America's energy security depends on revising the full array of policies based on the premise of an imminent transition to renewable energy. Instead, the U.S. government should adopt a fuel-neutral approach: not subsidizing a certain type of energy or banning others.

3. Eklavya Gupte, "G7 to stop fossil fuel funding, calls on OPEC to pump more oil," *S&P Global*, May 27, 2022. (https://www.spglobal.com/commodity-insights/en/news-research/latest-news/crude-oil/052722-g7-to-stop-fossil-fuel-funding-calls-on-opec-to-pump-more-oil)
4. Euronews Green with Reuters, "One of the world's biggest banks will no longer finance new oil and gas fields," *Reuters*, December 14, 2022. (https://www.euronews.com/green/2022/12/14/britains-biggest-bank-will-no-longer-finance-new-oil-and-gas-fields)
5. Frank Jordans, "Insurers withdraw from fossil fuel projects amid climate change fears," *Associated Press*, October 19, 2022. (https://apnews.com/article/business-climate-and-environment-63c8241a88586f18d1f81834c3f7effe); "Munich Re's approach to fossil fuels in underwriting and investment," *Munich Re*, April 3, 2023. (https://www.munichre.com/content/dam/munichre/contentlounge/website-pieces/documents/MunichRes-approach-to-fossil-fuels-in-underwriting-and-investment.pdf/_jcr_content/renditions/original./MunichRes-approach-to-fossil-fuels-in-underwriting-and-investment.pdf)
6. However, there are more mentions of Russia than climate. The White House, "Biden-Harris Administration's National Security Strategy," October 12, 2022. (https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf)

There Is No Energy Transition Coming

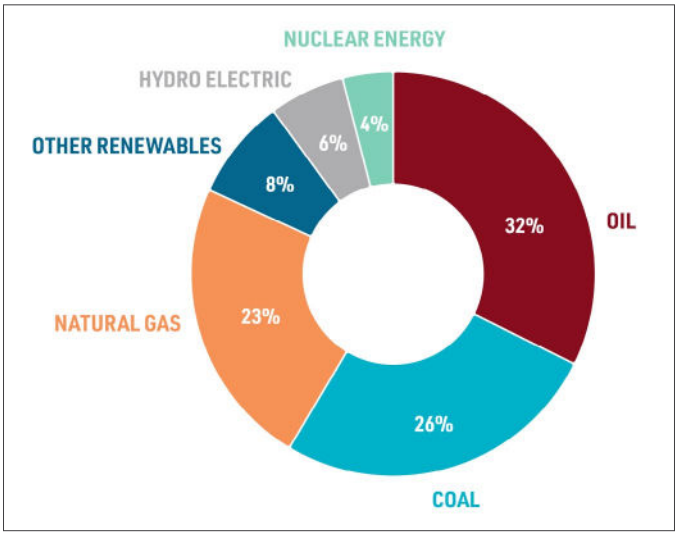
The presumption of an imminent energy transition is so widespread that policymakers, elected officials, journalists, and energy policy researchers routinely refer to "The" energy transition with a capital T.[7] In reality, there are few signs that renewable energy is on track to replace fossil fuels.[8]

> ***Energy Transition:** A change in the primary energy source or group of sources to a different energy source or fuels mix and the resulting economic, industrial, geopolitical, societal, technological, and environmental changes.*[9]

Fossil Fuels Still Dominate the U.S. and Global Fuel Mixes

Fossil fuels remain the dominant source of the world's energy. Despite forecasts of peak oil[10] and peak coal demand,[11] both continue to rise, with new records set in 2023. In that year, fossil fuels comprised 81.5 percent of the global fuel mix.[12] The figure for the United States was 83 percent.[13]

Figure 1: Global Energy Consumption by Energy Source, 2023



Source: https://www.energyinst.org/statistical-review

7. For example: International Energy Association, "Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach," September 2023. (https://iea.blob.core.windows.net/assets/8ad619b9-17aa-473d-8a2f-4b90846f5c19/NetZeroRoadmap_AGlobalPathwaytoKeepthe1.5CGoalinReach-2023Update.pdf); U.S. Department of Energy, "Biden-Harris Administration Announces More Than $104 Million to Advance Net-Zero Projects at Federal Facilities," January 17, 2024. (https://www.energy.gov/articles/biden-harris-administration-announces-more-104-million-advance-net-zero-projects-federal); World Economic Forum, "Fostering Effective Energy Transition: 2023 Edition Insight Report," June 26, 2023. (https://www.weforum.org/publications/fostering-effective-energy-transition-2023); European Union Blue Economy Observatory, "Energy Transition," accessed February 5, 2025. (https://blue-economy-observatory.ec.europa.eu/energy-transition_en); International Renewable Energy Agency (IRENA), "Outlook 2022: Executive Summary and Introduction," March 29, 2022. (https://www.irena.org/Digital-Report/World-Energy-Transitions-Outlook-2022#page-1)

8. Bjorn Lomborg, "We are wasting $2 trillion a year chasing 'green' fantasies," *New York Post*, August 11, 2024. (https://nypost.com/2024/08/11/opinion/we-are-wasting-2-trillion-a-year-chasing-green-fantasies)

9. The definition of "energy transition" in Alan Howard, Daniel Nussbaum, and Brenda Shaffer, *Operational Energy* (Berlin: De Gruyter, 2024), page 12.

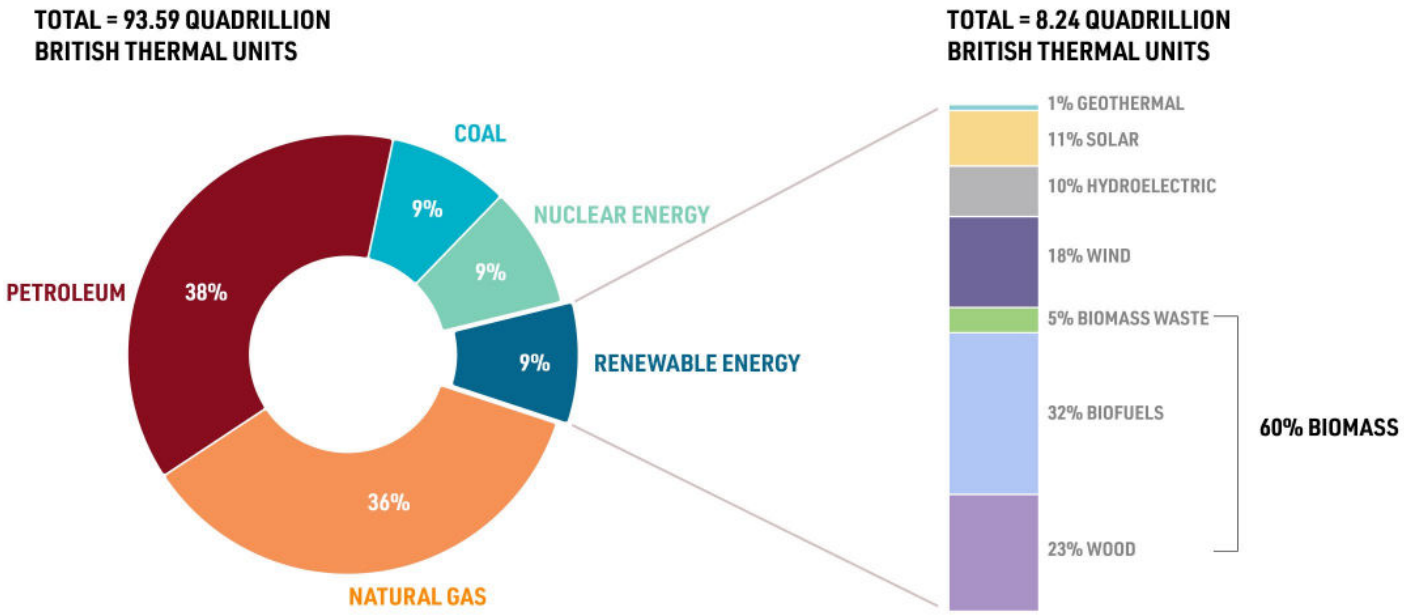
10. Noah Browning, "Oil demand set to peak by 2029, major supply glut looms, IEA says," *Reuters*, June 11, 2024.(https://www.reuters.com/business/energy/oil-demand-set-peak-by-2029-major-supply-glut-looms-iea-says-2024-06-12); Spencer Dale, "Peak oil demand and long-run oil prices," *BP*, January 10, 2018. (https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/bp-peak-oil-demand-and-long-run-oil-prices.pdf)

11. "Global coal demand expected to decline in coming years," *International Energy Association*, December 15, 2023. (https://www.iea.org/news/global-coal-demand-expected-to-decline-in-coming-years); Alex Lawler, "World oil, gas, coal demand to peak by 2030, IEA says," *Reuters*, October 24, 2023 (https://www.reuters.com/business/energy/world-oil-gas-coal-demand-peak-by-2030-iea-says-2023-10-24); Simon Evans, "Global coal use may have peaked in 2014, says latest IEA World Energy Outlook," *Carbon Brief* (UK), November 13, 2018. (https://www.carbonbrief.org/global-coal-use-may-have-peaked-iea-world-enery-outlook)

12. Energy Institute, "Statistical Review of World Energy," 2024. (https://www.energyinst.org/statistical-review)

13. Ibid.

Figure 2: U.S. Primary Energy Consumption by Energy Source, 2023



Data source: U.S. Energy Information Administration, *Monthly Energy Review*, Table 1.3 and 10.1. April 2024, preliminary data
Note: Sum of components may not equal 100% because of independent rounding.

Despite the promotion of renewables and extensive subsidies, the global fuel mix has not changed significantly over the past 50 years. Amid the oil crises in 1973 and 1979, "alternative energy" promotion began to take off. In 1973, fossil fuels provided 84.5 percent of global energy. By 1990, its share had risen to 86.8 percent. Then came a gradual decline to 84.7 percent in 2016, 83.4 percent in 2019, and 81.5 percent in 2023.[14]

The growth of wind and solar energy explains part of this modest decline.[15] However, part is explained by counting as renewable the burning of dung, wood, and other biomass.[16] Wood and other biomass comprise a quarter of U.S. renewable energy consumption.[17] Worldwide, at least 2.6 billion people use heavily polluting biomass such as charcoal, lump coal, and animal waste for home cooking and heating.[18] This poses threats to public health, especially for women

14. Ibid.
15. International Renewable Energy Agency, Press Release, "Record Growth in Renewables, but Progress Needs to be Equitable," March 27, 2024. (https://www.irena.org/News/pressreleases/2024/Mar/Record-Growth-in-Renewables-but-Progress-Needs-to-be-Equitable)
16. For instance, the International Energy Agency counts dung, wood and biomass as part of renewables and people that engage in gathering them as energy workers: International Energy Association, Press Release, "Nearly 700, 000 worked in low-emissions fuels…the substantial, often informal, sector providing wood, woodchips, and charcoal to rural households," *World Energy Employment 2024*, November 2024. (https://www.iea.org/reports/world-energy-employment-2024)
17. See figure 2.
18. Energy Institute, "Statistical Review of World Energy," 2024. (https://www.energyinst.org/statistical-review)



Wind turbines are located behind high-voltage pylons of several power lines. (Photo by Patrick Pleul/picture alliance via Getty Images)

and children, since they are exposed more often to the burning of biomass at home.[19]

Advocates of a transition to renewables correctly point out[20] that historic energy transitions have often required half a century from discovery to widespread adoption of a new technology. However, today's renewables have been available on a commercial scale for more than 70 years (some over 100 years) and still have not won over consumers and are dependent on subsidies. The IEA points out that a higher percentage of recent energy investments are being devoted to non-fossil fuels. Yet the bulk of these investments are taking place in China, where they are government-driven — not market driven — and focus largely on the production of solar and wind hardware for export to the West.

Today's Renewables Cannot Replace Fossil Fuels

The current generation of renewables — wind, solar, and hydropower — cannot replace fossil fuels for several reasons.[21] First, they create an energy system that is currently more expensive than the one it aims to replace. Second, the stability of generation from renewables depends on a baseload supply of energy from natural gas, nuclear, or coal. This is inherently more expensive than natural gas on its own.[22] Third, renewables have low energy density, which means they require more space and are heavier than fossil fuels, thus, they cannot be used in sectors where size and weight are critical, such as air travel. Moreover, the transport of low-density fuels is more expensive per unit of energy.[23] Fourth, renewable power is less efficient than fossil fuels, with high energy loss in transforming sources such as wind and solar into electricity and other products, such as hydrogen.[24] Fifth, there is no non-fossil fuel option to replace

19. Axel Eriksson, Asmamaw Abera, Ebba Malmqvist, and Christina Isaxon, "Characterization of fine particulate matter from indoor cooking with solid biomass fuels," *Indoor Air*, November 18, 2022. (https://pmc.ncbi.nlm.nih.gov/articles/PMC9828024); Alison Tomlin, "The Air Quality and Climate Impacts of Biomass Use as an Energy Source: A Review," *Energy and Fuels*, July 19, 2022. (https://eprints.whiterose.ac.uk/176499/3/Biomass%20review_2ndrevision_Clea)

20. Benjamin Sovacool, "How long will it take? Conceptualizing the temporal dynamics of energy transitions," *Energy Research & Social Science*, March 2016. (https://www.sciencedirect.com/science/article/pii/S2214629615300827?via%3Dihub); Vaclav Smil, "A Global Transition to Renewable Energy Will Take Many Decades," *Scientific American*, January 1, 2014. (https://www.scientificamerican.com/article/a-global-transition-to-renewable-energy-will-take-many-decades)

21. The reasons renewable energy cannot replace fossil fuels are discussed in Brenda Shaffer, "China is the main beneficiary of the West's futile energy transition push," *Nikkei Asia* (Japan), June 6, 2024. (https://asia.nikkei.com/Opinion/China-is-main-beneficiary-of-West-s-futile-energy-transition-push)

22. Matt Oliver and Szu Ping Chan, "Energy bills must rise to pay for net zero, says Siemens Energy boss," *The Telegraph* (UK), January 21, 2024. (https://www.telegraph.co.uk/business/2024/01/21/energy-bills-must-rise-pay-for-net-zero-siemens)

23. Daniel DeSantis, Brian D. James, Cassidy Houchins, Genevieve Saur, and Maxim Lyubovsky, "Cost of long-distance energy transmission by different carriers," *iScience*, December 17, 2021. (https://www.sciencedirect.com/science/article/pii/S2589004221014668); Fadl Saadi, Nathan Lewis, and Eric McFarland, "Relative costs of transporting electrical and chemical energy," *Energy & Environmental Science*, January 29, 2018. (https://pubs.rsc.org/en/content/articlelanding/2018/ee/c7ee01987d)

24. Torbørn Egeland-Eriksen, Amin Hajizadeh, and Sabrina Sartori, "Hydrogen-based systems for integration of renewable energy in power systems: Achievements and perspectives," *International Journal of Hydrogen Energy*, September 13, 2021. (https://www.sciencedirect.com/science/article/pii/S0360319921025064); Jonathan A. Lasser, "Green Hydrogen: A Multibillion-Dollar Energy Boondoggle," *Manhattan Institute*, February 1, 2024. (https://manhattan.institute/article/green-hydrogen-a-multibillion-dollar-energy-boondoggle)

commercial fertilizer, which is produced mainly from natural gas. Sixth, there is no renewable substitute for the dense liquid fuels used by militaries, which are usually the largest energy consumers in a given country.[25] Last, renewable energy requires extensive land usage.[26] Hydropower, the leading source of renewable energy, both in the United States and globally, destroys aquatic ecosystems. In addition, as noted, biomass releases significant amounts of carbon emissions and air pollutants.[27]

Despite all these obstacles, the United Nations and many Western policymakers claim that renewable energy is cheaper than fossil fuels.[28] Yet this claim reflects at best only the pure generation costs of electricity. However, the delivery of renewable electricity to homes and businesses entails several additional costs, such as laying and maintaining high-voltage electricity cables and the provision of baseload power from fossil fuels to ensure stability. Accounting for these factors yields what is known as the "levelized cost of electricity," which is generally lower for fossil fuels.[29] In many countries and U.S. states, generators of fossil fuel electricity are responsible for the full costs of the electricity system, while renewable companies have to bear only the costs of generation.

"The delivery of renewable electricity to homes and businesses entails several additional costs, such as laying and maintaining high-voltage electricity cables and the provision of baseload power from fossil fuels to ensure stability. Accounting for these factors yields what is known as the 'levelized cost of electricity,' which is generally lower for fossil fuels."

Proponents of an energy transition often point to falling costs for renewable energy hardware, such as solar panels, and the lower price of solar electricity in many markets.[30] But this still ignores the aforementioned levelized costs. Solar power requires paying for baseload power, the high-voltage cables to bring solar energy to locations of consumption, and the costs to the grid for the adjustments to solar energy volatility.[31]

25. Brenda Shaffer, "Militaries Cannot Transition to Renewable Energy," *Foreign Policy*, July 26, 2024. (https://foreignpolicy.com/2024/07/26/military-energy-defense-renewable-oil-gas-transition-weapons)
26. "Nuclear had the lowest median land-use intensity at 7.1 ha/TWh/year, and biomass the highest at 58,000 ha/TWh/year."
Linus Blomqvist, "What are the Land-Use Intensities of Different Energy Sources," *The Breakthrough Institute*, July 6, 2022. (https://thebreakthrough.org/blog/whats-the-land-use-intensity-of-different-energy-sources)
27. U.S. Energy Information Administration, "Hydropower explained," November 7, 2022. (https://www.eia.gov/energyexplained/hydropower/hydropower-and-the-environment.php); Sarah Cafasso, "Hydropower dams threaten fish habitats worldwide," *Stanford Doerr School of Sustainability*, February 3, 2020. (https://sustainability.stanford.edu/news/hydropower-dams-threaten-fish-habitats-worldwide); Christiane Zarfl, Jürgen Berlekamp, Fengzhi He, Sonja C. Jähnig, William Darwall, and Klement Tockner, "Future large hydropower dams impact global freshwater megafauna," *Scientific Reports*, December 6, 2019. (https://www.nature.com/articles/s41598-019-54980-8); "What We Do: Hydropower," *World Wildlife Fund*, October 2022. (https://www.wwf.eu/what_we_do/water/hydropower)
28. United Nations, "Renewables: Cheapest form of power," July 19, 2022. (https://www.un.org/en/climatechange/renewables-cheapest-form-power)
29. Lazard, "2023 Levelized Cost of Energy+," April 12, 2023. (https://www.lazard.com/research-insights/2023-levelized-cost-of-energyplus)
30. International Energy Agency, "World Energy Investment 2024: Overview and key findings," June 5, 2024. (https://iea.blob.core.windows.net/assets/60fcd1dd-d112-469b-87de-20d39227df3d/WorldEnergyInvestment2024.pdf)
31. Philippe Roos and Jason Eden, "Why Offshore Wind Costs are Still Increasing," *Energy Intelligence*, July 8, 2024. (https://www.energyintel.com/00000190-91ca-df74-a9f0-f5fa12eb0003); Simon Jack, "Price paid for offshore power to rise by over 50%," *BBC* (UK), November 15, 2023. (https://www.bbc.com/news/business-67430888)

Factors Impeding Renewable Energy Adoption

Those claiming that hydropower, wind, and solar can replace fossil fuels ignore three elements of an energy system: energy density, baseload power, and energy efficiency.[32]

Energy Density

Energy density is the relative volume and weight per unit of energy. Fossil fuels and uranium have high energy density. Today's renewable energy sources have very low energy density. Low-density fuels add costs to storage and transportation.

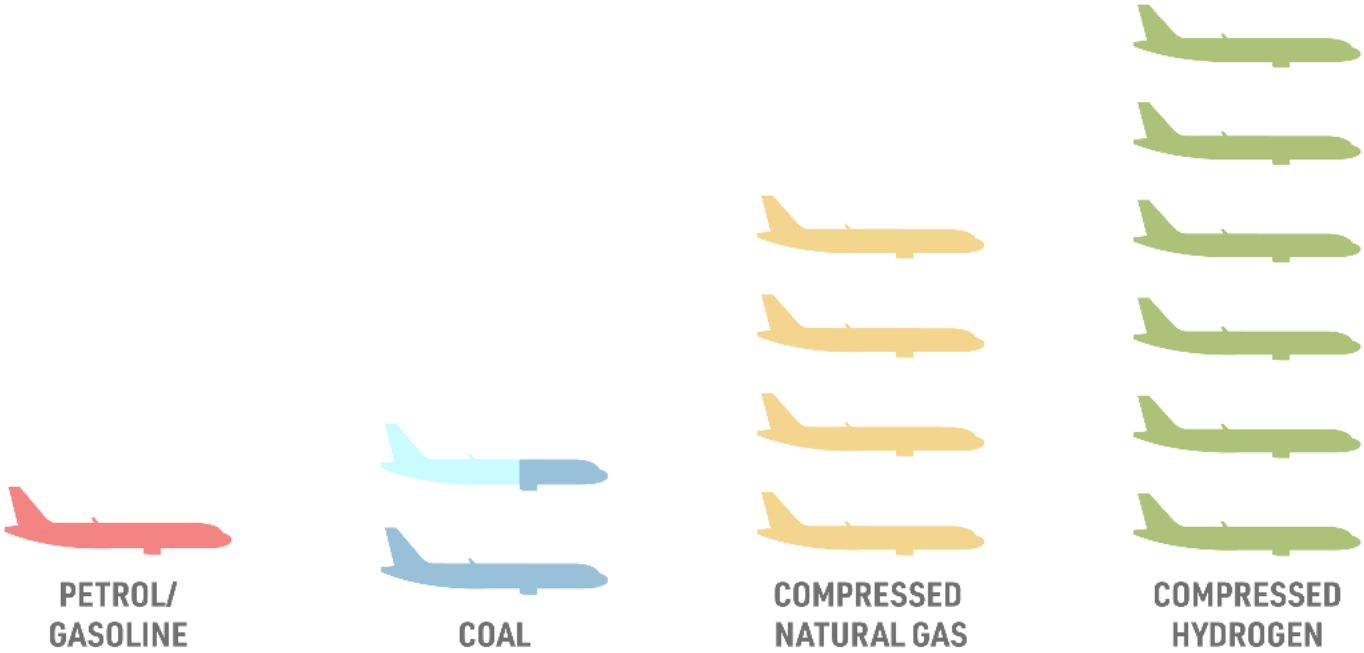
Baseload

Delivering stable electricity supplies requires a constant baseload. Accordingly, electricity produced by intermittent and non-storable renewable energy is paired with traditional baseload electricity produced by natural gas, coal, or nuclear. The current generation of renewable energy technologies cannot replace fossil fuels but is used in tandem with that of fossil fuels or nuclear energy to deliver electricity.

Energy Efficiency

In the process of transforming energy sources into different forms of energy and energy products, energy is lost. Also, electricity requires energy when transmitted over long distances. Thus, today's renewables, which transmit electricity produced from wind and solar over distances to homes and businesses or are transformed into energy products, like hydrogen, use energy in an inefficient manner.

Figure 3: Tank Size Matters: Fuel Sources Have Different Volumetric Energy Density[33]



Source: Advanced Biofuels, USA

32. See discussion of energy density in Alan Howard, Daniel Nussbaum, and Brenda Shaffer, *Operational Energy* (Berlin: De Gruyter, 2024), page 29.

33. Graph reprinted from Alan Howard, Daniel Nussbaum, and Brenda Shaffer, *Operational Energy* (Berlin: De Gruyter, 2024), page 30. Data in graph from Advanced Biofuels, USA.

Renewable Isn't Always Green

Renewable, clean, green energy: what's the difference?

Renewable energy: energy that is produced from sources that are not depleted through usage and are naturally replenishing, such as solar and wind energy.

Clean energy: energy whose production and usage generate low levels of carbon emissions and other greenhouse gases.

Green energy: energy whose production and usage have a low environmental impact.

The terms are not interchangeable. For instance, *renewable energy is not necessarily green energy or clean energy.* Often, policymakers, journalists, and activists use the terms renewable energy, clean energy, and green energy interchangeably. However, these terms refer to three distinct categories of energy.

Most leading organizations that report energy data count the burning of wood and animal waste as renewable energy. These sources, while technically renewable, generate significant pollution and greenhouse gases and are more damaging to human health than most uses of fossil fuels.[34]

In sum, all energy transitions in the past replaced the prevailing system with something better.[35] A transition to renewables would replace the existing system with one that is more expensive, less reliable, and less energy dense. There has been no technological advancement that changes these facts. Thus, various governments and international institutions — not markets — are driving a transition.

Energy in U.S. National Security Policy

America's energy bounty is a major source of U.S. power. Access to ample energy and the ability to supply its allies were major factors in the Allied victories in World Wars I and II.[36] Stable and relatively cheap domestic energy supplies have been a major factor in American economic prosperity throughout U.S. history. Energy is the world's most traded good, and energy prices are reflected in the cost of almost every good produced.

Successive American administrations — both Democrat and Republican — viewed energy security, including that of allies, as an essential element of national security.[37] Since the mid-20th century, the United States has viewed keeping maritime chokepoints and international sea lanes open as an essential security mission. This protects global trade, including energy.[38]

Yet under the Biden administration, energy policy became a subset of climate policy. The administration replaced energy security policies based on the fuels in use today with policies to promote renewable and low-carbon energy.[39] The premise behind this shift was

34. Based on Brenda Shaffer, "Renewable Isn't Always Green," *Real Clear Energy*, August 2, 2021. (https://www.realclearenergy.org/articles/2021/08/02/renewable_isnt_always_green_788231.html)
35. Vaclav Smil, *Energy Transitions* (Westport, Connecticut: Praeger, 2010).
36. Alan Howard, Daniel Nussbaum, and Brenda Shaffer, *Operational Energy* (Berlin: De Gruyter, 2024), Chapter two, pp. 12-26.
37. For example: Assistant Secretary for Economic Energy and Business Affairs Daniel S. Sullivan, "Energy and U.S. Foreign Policy: Security Through Diplomacy," *Address to Energy Council's Federal Energy and Environmental Matters Conference*, March 9, 2007. (https://2001-2009.state.gov/e/eeb/rls/rm/2007/82171.htm)
38. Secretary of the Navy Carlos Del Toro, "SECNAV Delivers Remarks at the National Press Club," *Remarks Delivered at the National Press Club in Washington*, February 21, 2023. (https://www.navy.mil/Press-Office/Speeches/display-speeches/Article/3304431/secnav-delivers-remarks-at-the-national-press-club)
39. The White House, "Biden-Harris Administration's National Security Strategy," October 2022. (https://web.archive.org/web/20221012160318/https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf)

that a transition to renewable energy was imminent. Accordingly, energy policy focused on establishing American access to the materials necessary for the solar and wind energy industries and electric vehicles.[40]

Biden officials waved away concerns about threats to the fossil fuel supply. When journalists asked then White House spokesperson Jen Psaki about the impact of the Ukraine crisis on the price of oil, she responded that the Biden administration would continue to concentrate on renewable energy since "real energy security comes from reducing our dependence on fossil fuels."[41] When then U.S. Secretary of Energy Jennifer Granholm was asked about the implications of the cyberattack on the Colonial Pipeline, the main fuel supply artery of the eastern United States, she laughed and said if Americans were using electric vehicles, they would not have been affected.[42] Of course, e-vehicles are even more susceptible to disruption from cyberattacks on the electricity and charging stations that fuel them and to the vehicles themselves.

In the 2022 U.S. National Security Strategy, the single section on energy security focuses on transitioning away from fossil fuels.[43] The document mentions "energy" 63 times, but over half of those mentions are in combination with "clean energy," "renewable energy," or "energy transition."[44] All mentions of fossil fuels in the strategy are negative even though the United States is the world's largest producer of oil and natural gas.[45]

Under the Biden administration, the Pentagon also retreated from activity that aimed to ensure U.S. and global energy security, such as keeping open major energy trade waterways and maritime chokepoints. Rather, the 2022 U.S. National Defense Strategy relates to energy mostly in the context of renewable energy, low-carbon energy, and the reduction of energy consumption.[46] Amid this shift, maritime insecurity has grown. Today, navigation in the Black Sea is extremely limited because of the war in Ukraine. Insecurity has grown in the Persian Gulf. Western shipping is threatened by the Iran-backed Houthis in the Red Sea (while Russian and Chinese vessels travel unmolested), and the Suez Canal, a key chokepoint, is operating under half its capacity.[47]

These maritime disruptions add a price premium to internationally traded oil and liquified natural gas (LNG), to shipped goods at large, and likely add a point to global inflation as well.[48] Escalation of the conflicts in the Black Sea and the Arab Gulf could disrupt significant volumes of fuel trade. These changes represent a setback for traditional U.S. national security policy.

40. The White House, Press Release, "Fact Sheet: Biden-Harris Administration Takes Further Action to Strengthen and Secure Critical Mineral Supply Chains," September 20, 2024. (https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2024/09/20/fact-sheet-biden-harris-administration-takes-further-action-to-strengthen-and-secure-critical-mineral-supply-chains)
41. @PressSec46, *X*, March 6, 2022. (https://x.com/PressSec46/status/1500587980699971586)
42. The White House, Press Briefing, "Press Briefing by Press Secretary Jen Psaki, Secretary of Energy Jennifer Granholm, and Secretary of Homeland Security Alejandro Mayorkas," May 11, 2021. (https://bidenwhitehouse.archives.gov/briefing-room/press-briefings/2021/05/11/press-briefing-by-press-secretary-jen-psaki-secretary-of-energy-jennifer-granholm-and-secretary-of-homeland-security-alejandro-mayorkas-may-11-2021)
43. However, there are more mentions of Russia than climate. The White House, "Biden-Harris Administration's National Security Strategy," October 2022. (https://web.archive.org/web/20221012160318/https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf)
44. Ibid.
45. Ibid.
46. U.S. Department of Defense, "2022 National Defense Strategy of the United States of America," October 24, 2022. (https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF)
47. Brendan Murray and Alex Longley, "Half of the Red Sea Container-Ship Fleet Avoids Route on Threat of Attacks," *Insurance Journal*, December 28, 2023. (https://www.insurancejournal.com/news/international/2023/12/28/753586.htm)
48. "Red Sea Shipping Disruptions: Estimating Economic Effects," *Congressional Research Service*, May 8, 2024. (https://crsreports.congress.gov/product/pdf/IF/IF12657); "Impacts of the Red Sea Shipping Crisis," J.P. Morgan, February 8, 2024. (https://www.jpmorgan.com/insights/global-research/supply-chain/red-sea-shipping); U.S. Energy Information Administration, "Red Sea attacks increase shipping times and freight rates," February 1, 2024. (https://www.eia.gov/todayinenergy/detail.php?id=61363)

To reverse the setbacks of the past four years, the new administration will need to reintegrate energy security for the fuels in use today into U.S. national security policies and U.S. foreign policy.

The Trump administration will face headwinds in its attempt to revitalize investments in fossil fuel. U.S. allies and international organizations insist a transition to renewable energy is the key to energy security. The administration can wield both carrots and sticks to address their obstruction.

"To reverse the setbacks of the past four years, the new administration will need to reintegrate energy security for the fuels in use today into U.S. national security policies and U.S. foreign policy."

On the carrot side, Washington should conduct serious discussions with the European Union and European governments based on reliable data demystifying how energy policies and usage affect climate, especially in the sphere of natural gas. As explained in this monograph, the climate impact of natural gas is likely exaggerated.

On the stick side, the new administration should cut U.S. funding to climate programs at the United Nations and overall funding to the International Energy Agency and the Department of Energy's Energy Information Administration if they continue to promote inaccurate assessments and policies that are not in line with their mandate.

Energy as Part of U.S. Foreign Engagement

Beginning in the 1970s, Washington advocated policies that improved European energy security and national security, focusing on lowering dependence on Russian gas supplies through the diversification of suppliers.[49] President Ronald Reagan even applied sanctions in an attempt to block the establishment of Soviet natural gas supplies to Europe.[50] Washington championed energy security projects around the world, such as the projects after the fall of the USSR that brought energy from the Caspian region to Europe, and worked to bring other diverse energy sources to Europe.[51] Europe today reaps the benefits of those American efforts.

Yet beginning in 2021, Washington retreated from promoting projects that would increase the energy security of its allies if these entailed the supply of fossil fuels. Under Biden, all foreign energy policy engagement was limited to the sphere of renewable energy. In October 2021, in its Interim Energy Engagement Guidance, the Biden administration instructed U.S. government agencies and embassies to work toward "ending international financing of carbon-intensive fossil-fuel based energy."[52] The 2021 guidance prohibited not only U.S. government finance but also technical and policy support and energy technology collaboration in natural gas projects abroad. The Biden administration barred agencies and U.S. embassies from engaging in policy discussions with foreign interlocutors on energy security policies that include

49. Thane Gustafson, The Bridge (Cambridge, Massachusetts: Harvard University Press, 2020); Jad Mouawad, "Conflict Narrows Oil Options for West," *The New York Times*, August 13, 2008. (https://www.nytimes.com/2008/08/14/world/europe/14oil.html)
50. Executive Secretariat, NSC: Meeting File, "NSC 00058 U.S.-E.C. [Steel Dispute and Soviet Sanctions Implementation]," *Ronald Reagan Presidential Library*, August 6, 1982. (https://www.reaganlibrary.gov/public/2022-03/40-750-80627194-004-039-2021.pdf)
51. Brenda Shaffer, "Caspian energy phase II: Beyond 2005," *Energy Policy*, November 2010, pages 7209-7215. (https://www.sciencedirect.com/science/article/abs/pii/S0301421510005811); Brenda Shaffer, "In the Era of U.S. Energy Abundance: The Role of the Caspian Region in U.S. Policy," *The Brown Journal of World Affairs*, August 25, 2020. (https://bjwa.brown.edu/26-2/in-the-era-of-u-s-energy-abundance-the-role-of-the-caspian-region-in-u-s-policy)
52. "State Department Issues New Guidance on Overseas Energy Projects," *Energy Workforce & Technology Council*, December 15, 2021. (https://www.energyworkforce.org/state-department-issues-new-guidance-on-overseas-energy-projects); "U.S. Ending Support for Overseas Gas, Oil Projects- Benefiting Climate & Clean Energy," *Natural Resources Defense Council*, December 10, 2021. (https://www.nrdc.org/press-releases/us-ending-support-overseas-gas-oil-projects-benefitting-climate-clean-energy); The White House, Press Release, "Executive Summary: U.S. International Climate Finance Plan," April 22, 2021. (https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2021/04/22/executive-summary-u-s-international-climate-finance-plan)

fossil fuels. The new administration should immediately cancel this order, but more needs to be done.

Today, several U.S. allies see the United States as a potentially unreliable supplier of energy due to its frequent flip-flopping on energy policies with each election. In 2024, the Biden administration halted the granting of permits for new LNG exports.[53] This greatly affected U.S. allies' planned access to gas, especially in Asia and Germany. In response, Japan sought to increase LNG imports from Qatar and other Middle East producers.[54] At the same time, disagreements are likely to arise soon with the European Union, which

"Today, several U.S. allies see the United States as a potentially unreliable supplier of energy due to its frequent flip-flopping on energy policies with each election."

may block future U.S. LNG exports into Europe since their methane releases are not in line with EU regulations. The European Union may use its market power in an attempt to coerce the United States to adopt methane regulations in its natural gas production.[55] Washington needs to repair its reputation as a reliable energy supplier.

Most U.S. Allies Are Energy Insecure

Many U.S. allies have hurt their own energy security and economic durability not only by promoting the use of renewable energy but also, in parallel, by suppressing the production and import of fossil fuels. The lack of energy security of U.S. allies and their subsequent economic decline could create a security burden for the United States.

U.S. allies are damaging the current energy supply system, and nothing new is in line to replace it. Past energy transitions did not require killing horses and camels to convince consumers to acquire cars and trucks or plan air travel. China's leader, Xi Jinping, stated openly that when it comes to energy and climate policies, China is sticking to the principle of "establishing the new before destroying the old."[56] Western countries aren't as wise, and China benefits from this.

For instance, the European Union and Canada have set investment regulations — "green taxonomy" — that block investments and loans for fossil fuel production and trade.[57] Upon taking office in 2024, the British Labour government halted new oil drilling licenses and failed to defend in court the right to licenses granted

53. The White House, Press Release, "Fact Sheet: Biden-Harris Administration Announces Temporary Pause on Pending Approvals of Liquified Natural Gas Exports," January 26, 2024. (https://web.archive.org/web/20240126102126/https://www.whitehouse.gov/briefing-room/statements-releases/2024/01/26/fact-sheet-biden-harris-administration-announces-temporary-pause-on-pending-approvals-of-liquefied-natural-gas-exports)

54. "Oman LNG signs sale and purchase agreement with Japanese firm JERA," *Gulf Times* (Qatar), April 16, 2024. (https://www.gulf-times.com/article/680738/region/oman-lng-signs-sale-and-purchase-agreement-with-japanese-firmjera); Andrew Mills, "Qatar to sign more long-term LNG contracts this year, QatarEnergy CEO says," *Reuters*, May 15, 2024. (https://www.reuters.com/markets/commodities/qatar-sign-more-long-term-lng-contracts-this-year-qatarenergy-ceo-says-2024-05-15)

55. Corey Paul, "Biden officials seek to align regulations on US LNG with European methane rules," *S&P Global*, November 14, 2024. (https://www.spglobal.com/commodity-insights/en/news-research/latest-news/lng/111424-biden-officials-seek-to-align-regulations-on-us-lng-with-european-methane-rules)

56. Ivy Yin and Eric Yep, "China to boost development of new energy system, climate change governance: Xi," *S&P Global*, October 17, 2022. (https://www.spglobal.com/commodity-insights/en/news-research/latest-news/energy-transition/101722-china-to-boost-development-of-new-energy-system-climate-change-governance-xi)

57. European Commission, "EU Taxonomy for sustainable activities," accessed February 5, 2025. (https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en); Melissa Shin, "Canada Green Taxonomy Unlikely to Include New Natural Gas Projects," *BNN Bloomberg*, October 9, 2024. (https://www.bnnbloomberg.ca/investing/commodities/2024/10/09/canada-green-taxonomy-unlikely-to-include-new-natural-gas-projects)

by the previous government in the North Sea.[58] Yet downsizing oil and gas production in the West will have no meaningful impact on global climate emissions since the production will just be picked up outside the United States and Europe, including by Iran, Venezuela, and Russia. In fact, this transfer will likely lead to an increase in emissions and pollution since those producers observe less stringent environmental policies.[59]

The Biden administration, allies in Europe, the United Nations, and the International Energy Agency have also promoted the electrification of economies to harness renewable energy since today's renewable energy produces primarily electricity. However, the concentration of energy in one source flies in the face of energy security policies, which demand diversification.

Europe's energy policies are leading to economic decline and insecurity, which can ultimately create a new security burden for the United States. Moreover, expensive electricity in Europe has led to the collapse of many energy-intensive industries, especially in Germany.[60] This reduction of manufacturing capacity and the trend of deindustrialization in Europe thwart U.S. plans to reshore and ally-shore critical manufacturing capacity. If Japan, Taiwan, and South Korea continue along the path of decarbonizing their power sectors (and in the case of Taiwan, closing its nuclear energy capacity),[61] much additional manufacturing capacity will be lost or, at minimum, become uncompetitive.

The private sector in the West has also adopted measures to reduce growth in fossil fuel production and consumption, which will create significant headwinds to Trump administration plans to unleash the production of fossil fuels. For instance, some banks[62] and insurance companies[63] have halted loans and coverage for fossil fuel production and supply. Although the current market demand for fossil fuels and price trends suggest the sector would offer a significant return on investment, some investors have steered away their capital, fearing government and public backlash. Well-funded nongovernmental organizations also conduct lawfare in U.S. courts to prevent fossil fuel production and transportation, and this will likely grow under the Trump administration. The NGOs rely on UN reports in many of their legal cases. Thus, through its funding of the UN climate activity, the United States undermines its ability to produce fossil fuels.

The Two Worlds

In the early 2020s, a new and powerful alliance emerged among China, Russia, Iran, and North Korea. Previously, each state could pose security challenges to the United States that were surmountable. However, the united strength of these four states poses a significant threat to the United States and its allies. In combination, the strengths of each alliance member offset the weaknesses of others. Iran and Russia, for instance, supply energy to import-dependent

58. Abby Wallace and Andrew McDonald, "The UK is backing away from oil," *Politico Europe* (Belgium), September 10, 2024. (https://www.politico.eu/article/uk-government-north-sea-oil-labour-ed-miliband-keir-starmer-green-energy)
59. Dalga Khatinoglu, "Iran Sees Historic Gas Flaring Surge Amid Energy Deficit," *Iran International*, June 30, 2024. (https://www.iranintl.com/en/202406306786); Isayen Herrera and Sheyla Urdaneta, "Venezuela's Oil Industry Is Broken. Now It's Breaking the Environment," *The New York Times*, July 22, 2023. (https://www.nytimes.com/2023/07/22/world/americas/venezuela-oil-energy-environment.html)
60. Yushu Chen, Ting Lan, Aiko Mineshima, and Jing Zhou, "Impact of High Energy Prices on Germany's Potential Output," *International Monetary Fund*, July 2023. (https://www.imf.org/-/media/Files/Publications/Selected-Issues-Papers/2023/English/SIPEA2023059.ashx)
61. "Taiwanese reactor enters retirement," *World Nuclear News* (UK), March 14, 2023. (https://www.world-nuclear-news.org/Articles/Taiwanese-reactor-enters-retirement)
62. Euronews Green with Reuters, "One of the world's biggest banks will no longer finance new oil and gas fields," *Reuters*, December 14, 2022. (https://www.euronews.com/green/2022/12/14/britains-biggest-bank-will-no-longer-finance-new-oil-and-gas-fields)
63. Frank Jordans, "Some risks too big: Insurers withdraw from fossil projects," *Associated Press*, October 19, 2022. (https://apnews.com/article/business-climate-and-environment-63c8241a88586f18d1f81834c3f7effe); "Munich Re's approach to fossil fuels in underwriting and investment," *Munich Re* (Germany), April 13, 2023. (https://www.munichre.com/content/dam/munichre/contentlounge/website-pieces/documents/MunichRes-approach-to-fossil-fuels-in-underwriting-and-investment.pdf/_jcr_content/renditions/original./MunichRes-approach-to-fossil-fuels-in-underwriting-and-investment.pdf)

China and North Korea. This energy trade serves as a glue for the alliance. And the axis has established an energy trade system that avoids many of the restraints imposed by existing U.S. energy sanctions.[64] This bloc of adversaries also pursues energy and climate policies that enhance their national security while exploiting the self-defeating policies of the West.

Vast Differences in Energy and Climate Policies

Western governments pursue an illusory transition to renewables, while the China-led alliance roars upward in fossil fuel production and consumption.[65] Carbon emissions in the West are flat or declining, while those of the China-Russia-Iran-North Korea bloc continue to increase. The West is building electricity systems that produce more expensive and less reliable power, while the Chinese bloc continues to produce cheaper and more reliable power (see Figure 5 on electricity prices). Energy is one of the most important inputs in manufacturing costs, and often the top input.[66] Thus, the bloc of Western adversaries improves its competitive position, while the West harms its own standing. In addition, global climate policies promote a huge wealth transfer from the West to so-called developing countries, which include China[67] and India thanks to skewed UN definitions.[68]

Figure 4: The Energy Divide: The West vs. Russia, China, Iran, and North Korea

Alliance 1: U.S., Europe, Japan, South Korea, Taiwan, Australia, New Zealand	Lowering fossil fuel production and consumption	Moving to more expensive and less reliable energy	32% of global GDP	Decreased manufacturing capacity	Spending money on reducing greenhouse gas emissions and lowering emissions	Global oil market	Commitment and policies to reduce methane emissions	Reducing nuclear energy capacity
Alliance 2: China, Iran, Russia, North Korea, (India)[69]	Raising fossil fuel production where they can; increasing fossil fuel consumption	Moving to more reliable and less expensive electricity than Alliance 1	29% of global GDP	Increased industrialization or no change	Increased greenhouse gases	Separate oil market outside U.S. sanctions	No commitment or policies to reduce methane emissions	Increasing nuclear energy capacity

64. Max Lin, "China takes lead in shipping Russian crude amid new high for non-G7 share," *S&P Global*, July 12, 2024. (https://www.spglobal.com/commodity-insights/en/news-research/latest-news/crude-oil/071224-china-takes-lead-in-shipping-russian-crude-amid-new-high-for-non-g7-share)

65. International Energy Association, "China: Total CO2 emissions from energy," 2022. (https://www.iea.org/countries/china/emissions); Seth Borenstein, "World carbon dioxide emissions increase again, driven by China, India and aviation," *Associated Press*, December 4, 2023. (https://apnews.com/article/carbon-dioxide-climate-change-china-india-aa25e5a4271aa45810c435280bb97879)

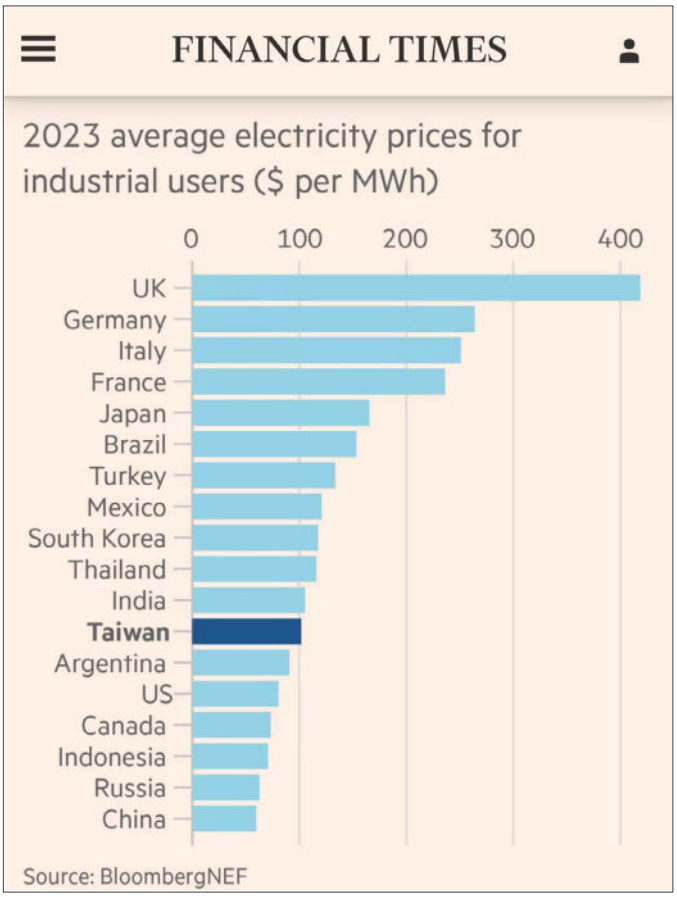
66. Jane Nakano and Joseph Majkut, "Strategic Equilibrium: The United States' Manufacturing Resurgence and the Role of Natural Gas in a Carbon-Competitive World," *Center for Strategic and International Studies*, September 10, 2024. (https://www.csis.org/analysis/strategic-equilibrium-united-states-manufacturing-resurgence-and-role-natural-gas-carbon)

67. Dan Murtaugh, John Ainger, and Alfred Cang, "China Sets Up a Climate Money Fight," *Bloomberg*, November 22, 2024. (https://www.bloomberg.com/news/newsletters/2024-10-22/china-sets-up-a-climate-money-fight)

68. Green Climate Fund, "About GCF," 2019. (https://www.greenclimate.fund); United Nations: Climate Change, "Key Aspects of the Paris Agreement," December 12, 2015. (https://unfccc.int/most-requested/key-aspects-of-the-paris-agreement); Climate Action Network International, Press Release, "US$5 trillion owed to Global South by Global North due to the climate crisis," September 20, 2024. (https://climatenetwork.org/2024/09/20/us5trillion-owed-to-global-south-by-global-north-due-to-the-climate-crisis); Timothy Puko, "Rich countries promised poor nations billions for climate change. They aren't paying," *The Washington Post*, October 9, 2023. (https://www.washingtonpost.com/climate-environment/2023/10/09/rich-nations-pledged-poor-ones-billions-climate-damages-they-arent-paying); Dan Murtaugh, John Ainger, and Alfred Cang, "China Sets Up a Climate Money Fight," *Bloomberg*, November 22, 2024. (https://www.bloomberg.com/news/newsletters/2024-10-22/china-sets-up-a-climate-money-fight)

69. India is not a member of the China-Russia-Iran-North Korea alliance, but its energy and climate policies largely emulate the bloc's policies.

Figure 5: 2023 Average Electricity Prices for Industrial Users



Energy Is the Glue of the New Alliance

China's dependence on international energy trade has shaped its foreign policy. China's enormous economic growth in the early 1990s created the need for additional oil supplies beyond domestic production. In 1993, China became a net importer of oil.[70] The need to access additional oil gave birth in 2000 to the Chinese Communist Party's policy of "going out," which encouraged Chinese agencies and companies to establish trade and promote peaceful relations with several key countries to ensure that imported oil could reach the Chinese market. This turned China from a country that was supporting terrorist movements in the Middle East to a friendly partner of the Gulf States and a supporter of the region's geopolitical status quo.[71]

With its new alliance with Russia and Iran, China is no longer dependent on trade outside that bloc to access energy. With the application of Western sanctions on Russian and Iranian oil exports, China can access energy supplies securely and at a cheaper price.[72] The application of these sanctions without corresponding sanctions on Russia's and Iran's customers (known as secondary sanctions) created conditions for Beijing to buy oil at a significant discount without risking legal trouble. Albeit unintentionally, the West facilitated its adversaries' interdependence.

Energy Trade System Separate From the West

While the West has not imposed sanctions on China, it was clear to Beijing that it might happen in the future. Establishing a sanctions-proof energy trade network would be of paramount strategic benefit. The Axis energy trade network would also help cement the new alliance.

70. Guy C.K. Leung, "China's oil use, 1990–2008," *Energy Policy*, February 2010, pages 932-944. (https://www.sciencedirect.com/science/article/abs/pii/S0301421509007927)
71. Yitzhak Shichor, "Competence and Incompetence: The Political Economy of China's Relations with the Middle East." *Asian Perspective*, 2006, pages 39-67. (https://dx.doi.org/10.1353/apr.2006.0003)
72. "China oil imports from Iran surge to 1.75m bpd: report," *Tehran Times* (Iran), August 31, 2024. (https://www.tehrantimes.com/news/503138/China-oil-imports-from-Iran-surge-to-1-75m-bpd-report); Saeed Ghasseminejad, "China Lies About Its Oil Imports From Iran," *Foundation for Defense of Democracies*, May 6, 2024. (https://www.fdd.org/analysis/2024/05/06/china-lies-about-its-oil-imports-from-iran); "China's Oil Imports from Iran Reach the Highest," *Shana Petro Energy Information Network*, July 5, 2024. (https://en.shana.ir/news/643783/China-s-Oil-Imports-from-Iran-Reach-the-Highest); "Iran's Petroleum Exports to China and U.S. Sanctions," *Congressional Research Service*, November 8, 2024. (https://crsreports.congress.gov/product/pdf/IN/IN12267); "Energy exports from Russia to China up 4% to 46 bln in H1-Sechin," *Interfax*, July 23, 2024. (https://interfax.com/newsroom/top-stories/104494); "Russia Says Redirected Most Oil Exports to China, India," *Agence France-Presse* (France), December 27, 2023. (https://www.themoscowtimes.com/2023/12/27/russia-says-redirected-most-oil-exports-to-china-india-a83578)

As part of their energy trade, China, Russia, Iran, and North Korea established all the major nodes of an international energy supply system independent of the West. This includes oil tankers,[73] LNG vessels,[74] insurance companies, banks, and technology transfers. The U.S. Department of the Treasury[75] was confident in early 2022 that a Western cap on the price of Russian oil would lower Russian revenue from oil sales. But thanks to the new alternative supply network, Russian oil sold regularly at a price above the cap, proving the Biden administration wrong.[76]

China

By attempting to move from fossil fuels to wind and solar, the West is replacing an energy system led by the United States with one that China leads. Beijing controls most of the necessary minerals along with critical elements for producing wind and solar energy hardware, not to mention the electric vehicle supply chain. This means China is in the driver's seat as the West tries to move its energy system to electricity. Through it all, China remains reliant on coal, which is cheaper and more reliable, despite higher emissions and air pollution. When Western industries, such as steel, become uncompetitive due to increased energy costs,[77] China will likely be able to gain market share.

Meanwhile, China is the world's largest emitter of greenhouse gases, generating more than double the United States' emissions.[78] Beijing has committed to reducing carbon emissions beginning in 2030,[79] meaning it can continue to ramp them up for the rest of the decade. Worse, China has not even pledged to lower methane emissions. By contrast, the Biden administration made U.S. electricity less reliable and created impediments to natural gas production to reduce methane emissions even though U.S. emissions are lower than China's.[80]

China and some U.S. environmental organizations promote climate policies that end up benefiting Beijing by raising the cost and lowering the reliability of energy supplies in the United States. A troubling example of this entanglement is the relationship between the U.S. Energy Foundation and Energy Foundation China, which operated together as a single entity until 2019.[81] Both continue to operate as public charities under Section 501(c)(3) of the

73. Anastasia Stognei, "Russia's shadow fleet grows despite western crackdown," *Financial Times* (UK), October 13, 2024. (https://www.ft.com/content/fbad4462-5ed8-4f75-80d7-79459607277c)
74. Malcom Moore and Shotaro Tani, "How Russia's LNG 'dark fleet' disguises its activity," *Financial Times* (UK), October 8, 2024. (https://www.ft.com/content/f17ba404-fc02-4cfc-80a6-86f4ebdec4ad); Max Lin, "LNG dark fleet' could emerge to transfer Russian gas amid sanctions: Flex LNG," *S&P Global*, May 4, 2024. (https://www.spglobal.com/commodity-insights/en/news-research/latest-news/shipping/052424-lng-dark-fleet-could-emerge-to-transfer-russian-gas-amid-sanctions-flex-lng)
75. U.S. Department of the Treasury, Press Release, "Fact Sheet: Limiting Kremlin Revenues and Stabilizing Global Energy Supply with a Price Cap on Russian Oil," December 2, 2022. (https://home.treasury.gov/news/press-releases/jy1141)
76. Victor Jack and Gabriel Gavin, "Russian oil price cap has largely failed, new report finds," *Politico Europe* (Belgium), December 5, 2023. (https://www.politico.eu/article/russia-oil-price-cap-ukraine-war-centre-research-energy-clean-air); Adi Imsirovic and Ben Cahill, "Russian Oil Price Caps Are Failing a Key Test," *Center for Strategic and International Studies*, October 25, 2023. (https://www.csis.org/analysis/russian-oil-price-caps-are-failing-key-test)
77. "Germany's crude steel output in 2023 at lowest since 2009, WV Stahl says," *Euro Metal*, January 24, 2024. (https://eurometal.net/germanys-crude-steel-output-in-2023-at-lowest-since-2009-wv-stahl-says); Benjamin Wehrmann, "Energy costs, regulation see drastic steel output reduction at German factory – Thyssenkrupp," *Clean Energy Wire* (Germany), April 12, 2024. (https://www.cleanenergywire.org/news/energy-costs-regulation-see-drastic-steel-output-reduction-german-factory-thyssenkrupp)
78. International Energy Association, "The changing landscape of global emissions: CO2 Emissions in 2023," 2024. (https://www.iea.org/reports/co2-emissions-in-2023/the-changing-landscape-of-global-emissions)
79. Ivy Yin, "COP28: China to release 2030, 2035 national climate targets in 2025," *S&P Global*, December 2, 2023.(https://www.spglobal.com/commodity-insights/en/news-research/latest-news/energy-transition/120223-cop28-china-to-release-2030-2035-national-climate-targets-in-2025)
80. Global Methane Pledge, "Pledge Participants," accessed February 5, 2025. (https://www.globalmethanepledge.org/#pledges)
81. Energy Foundation China, "About Us," accessed February 5, 2025. (https://www.efchina.org/About-Us-en/Introduction-en)

U.S. tax code, with headquarters in San Francisco. In 2022, the most recent year on record, the U.S. Energy Foundation awarded more than $130 million in support of its mission to "accelerate the transition to a clean energy economy."[82] Meanwhile, a Fox News investigation of Energy Foundation China found that "the majority of its operations are conducted in China with a staff that boasts extensive ties to the Chinese Communist Party (CCP)."[83] CEO Ji Zou previously served as deputy director general of China's National Center for Climate Change Strategy. He was also part of the team that negotiated the Paris Climate Agreement on China's behalf and served as a Chinese representative on climate issues at the United Nations.[84] While the foundation's grantmaking focused on Asia, it has given $12 million to U.S. recipients since 2020, according to an analysis by The Washington Free Beacon.[85] Recipients included the Rocky Mountain Institute and the Natural Resources Defense Council. The Rocky Mountain Institute advocates for ending the use of fossil fuels and was one of the main proponents of banning gas stoves and appliances in the United States.[86]

Like many charities, Energy Foundation China discloses minimal information about the sources of its funding. One of its funders is the Global Methane Hub,[87] which promotes the reduction of methane emissions, especially from the use of natural gas. As noted below, China is a primary beneficiary of efforts to reduce Western usage of natural gas. Whereas the U.S. Energy Foundation states on its website that it "does not accept foreign funding,"[88] Energy Foundation China makes no such assertion on its funding page or elsewhere in the "About Us" section of its website.[89] Not surprisingly, the U.S. Energy Foundation provides very minimal detail about its years of coexistence with Energy Foundation China. On its FAQ page, there is one brief acknowledgment of their 20-year relationship.[90]

Many American environmental NGOs focus their international work on China, where many established their first offices abroad. For instance, the Rocky Mountain Institute has an extensive China program.[91] The World Wildlife Foundation has been working with China since 1980 and has an office with over 110 staff members there, as of late 2024.[92] The Environmental Defense Fund (EDF) has spent two decades working in China, earning itself a place "as an advisor on China's highest international advisory body on the environment."[93]

82. U.S. Department of the Treasury, Internal Revenue Service, Form 990, Public Disclosure Copy, "Company Exempt From Income Tax," 2022. (https://www.ef.org/wp-content/uploads/2022-990-Form.pdf)
83. Thomas Catenacci and Joe Schoffstall, "CCP-tied group is quietly fueling US-based climate initiatives: tax filings," *Fox News*, December 18, 2023. (https://www.foxnews.com/politics/ccp-tied-group-quietly-fueling-us-based-climate-initiatives-tax-filings)
84. Energy Foundation China, "About Us: CEO and President: Ji Zou," accessed February 5, 2025. (https://www.efchina.org/About-Us-en/Staff-en/JiZOU-en)
85. Thomas Catenacci, "Ex-CCP Officials Funneled Millions to US Universities, Nonprofits To Promote Green Energy, Tax Forms Show," *The Washington Free Beacon*, December 10, 2024. (https://freebeacon.com/energy/ex-ccp-officials-steered-millions-to-us-based-green-groups-universities-for-climate-initiatives)
86. Ibid.
87. Energy Foundation China, "About Us: Key Funders," accessed February 5, 2025. (https://www.efchina.org/About-Us-en/Funders-en)
88. U.S. Energy Foundation, "About Us: FAQs," (https://www.ef.org/about-us/faq), 2025.
89. Energy Foundation China, "About Us: Introduction," accessed February 5, 2025. (https://www.efchina.org/About-Us-en/Introduction-en)
90. U.S. Energy Foundation, "About Us: FAQs," accessed February 5, 2025. (https://www.ef.org/about-us/faq)
91. "China Program," RMI, accessed February 5, 2025. (https://rmi.org/our-work/china-program)
92. "World Wildlife Fund China," *World Wildlife Fund China*, accessed February 5, 2025. (https://www.wwfchina.org)
93. Environmental Defense Fund, "China," 2025. (https://www.edf.org/place/china)

Despite China being the world's top emitter of carbon[94] and methane, while coal dominates its electricity production,[95] climate activist groups portray Beijing as a "green energy leader," as referred to in a publication from the Energy Institute.[96] The China homepage of the Natural Resources Defense Council begins by observing, "China has made a serious commitment to turning its cities into healthier places to live and currently leads the world in renewable energy installation and electric vehicle penetration."[97] Until at least 2022, the EDF website declared, "As the United States steps away from global climate leadership, China is stepping up," and "Fortunately, China is serious about climate action."[98] Even the IEA's web page on energy in China begins by stating, "China's growing energy needs are increasingly met by renewables, natural gas and electricity."[99]

China leads the global production of solar panels as well as wind energy towers and blades, while electric vehicles have penetrated the Chinese market. However, the manufacturing of EVs and renewable energy hardware in China depends on power mostly from coal, which likewise provides the electricity to power EVs. In essence, Chinese EVs are coal-fired cars. As IEA data shows, coal provides over 60 percent of China's electricity.[100]

Figure 6: Electricity Generation Mix, China, 2022



Source: https://www.iea.org/countries/china/energy-mix

94. "Report: China emissions exceed all developed nations combined," *BBC* (UK), May 6, 2021. (https://www.bbc.com/news/world-asia-57018837)
95. Ivy Yin, "Coal still accounted for nearly 60% of China's electricity supply in 2023: CEC," *S&P Global*, January 31, 2024. (https://www.spglobal.com/commodity-insights/en/news-research/latest-news/energy-transition/013124-coal-still-accounted-for-nearly-60-of-chinas-electricity-supply-in-2023-cec)
96. "Exploring China's enormous green energy shift," *Energy Institute*, May 6, 2024. (https://knowledge.energyinst.org/new-energy-world/article?id=138820)
97. "Be a force for the future," *Natural Defense Council*, accessed February 5, 2025. (https://www.nrdc.org)
98. "Why China is at the center of our climate strategy," *Environmental Defense Fund*, accessed February 5, 2025. (Archived version available at https://web.archive.org/web/20221026105555/https://www.edf.org/climate/why-china-center-our-climate-strategy)
99. International Energy Association, "China: Total CO2 emissions from energy," accessed February 5, 2025. (https://www.iea.org/countries/china/emissions)
100. Ibid.

UN Controls the Science

"We own the science, and we think that the world should know it."

During a World Economic Forum session in September 2022, Melissa Fleming, the UN under-secretary-general for global communications, declared that the United Nations has no equal when it comes to climate change: "We own the science, and we think the world should know it."[101] Her statement is true. The United Nations supervises the evaluation and synthesis of climate research and publishes reports with unparalleled influence. Most companies and governments, including the U.S. government, base their assessments and policy decisions on UN reports and data.[102] When you hear, "listen to the science," you are actually being referred to the United Nations. In no other scientific field does a political body wield such influence.

Many of the United Nations' climate policy recommendations promote the interests of China. Moreover, UN climate officials frequently praise China for its role in combating climate change[103] despite China serving as the source of the highest amount of emissions. If the Trump administration is going to be successful in changing U.S. energy policies in the long term, it must stop funding the climate activity of the United Nations and other organizations that seek to undermine those policies.

UN Convenes and Hosts the Mainstream Climate Policy Institutions

The United Nations is the home of the main institutions promoting climate change action and an end to the use of fossil fuels. The United Nations hosts the annual global climate summits — the Conference of Parties (COP) meetings that agree each year on global climate policies, which most countries around the world adopt officially, although only some implement them in practice. The United Nations also houses the major global agreements related to climate change — the United Nations Framework Convention on Climate Change (UNFCC).

The Intergovernmental Panel on Climate Change (IPCC) — a UN body — also authors the main reports that inform governments and the wider public on the state of the climate. The IPCC has gone beyond its mandate of reporting on scientific developments and has transformed itself into a body for approval of methodology and standards.[104] University of Sussex economics professor Richard S.J. Tol states, "The Intergovernmental Panel on Climate Change has a monopoly on the provision of climate policy advice at the international level and a strong market position in national policy advice."[105]

U.S. government officials routinely refer to the IPCC reports when discussing climate change. References

101. World Economic Forum, "Tackling Disinformation - how can we combat the lies that go viral?" September 30, 2022. (https://www.weforum.org/stories/2022/09/tackling-disinformation-agenda-dialogues); Brittany Bernstein, "U.N. Communications Official Touts the Google Search Partnership: 'We Own the Science,'" *National Review*, October 4, 2022. (https://www.nationalreview.com/news/u-n-communications-official-touts-google-search-partnership-we-own-the-science)

102. "The Intergovernmental Panel on Climate Change Sixth Assessment Report (AR6)," *Met Office* (UK), accessed February 5, 2025. (https://www.metoffice.gov.uk/weather/climate-change/organisations-and-reports/ipcc-sixth-assessment-report); Piers Forster, "What does the IPCC report mean for the UK's climate policy?" *Climate Change Committee*, September 6, 2021. (https://www.theccc.org.uk/2021/09/06/what-does-the-ipcc-report-mean-for-the-uks-climate-policy); "The Met Office and the IPCC," *Met Office* (UK), March 20, 2023. (https://www.metoffice.gov.uk/weather/climate-change/organisations-and-reports/intergovernmental-panel-on-climate-change-ipcc); Juergen Voegele, "The IPCC report hits home: how our work in sustainable development is helping countries tackle the climate crisis," *World Bank*, March 4, 2022. (https://blogs.worldbank.org/en/climatechange/ipcc-report-hits-home-how-our-work-sustainable-development-helping-countries-tackle)

103. Sarah Schonhardt and Zia Weise, "China must now lead global warming fight, UN climate chief says," *Politico Europe* (Belgium), November 15, 2024. (https://www.politico.eu/article/china-lead-global-climate-fight-un-climate-chief-simon-stiell-cop-azerbaijan-clean-energy)

104. Jessica Weinkle, "The IPCC is the trust we need to bust," *The Breakthrough Journal*, July 12, 2024. (https://thebreakthrough.org/journal/no-20-spring-2024/the-ipcc-is-the-trust-we-need-to-bust)

105. Richard S.J. Tol, "Regulating knowledge monopolies: the case of the IPCC", *Climatic Change*, August 26, 2021, pages 827-839. (https://link.springer.com/article/10.1007/s10584-011-0214-6)

to IPCC reports appear in most U.S. government agency reports and statements on climate change.[106] Washington and most Western governments base their climate impact assessments and policies on the IPCC assessments.[107]

The IPCC is composed of representatives from each UN member country. However, this system gives more weight to China and its allies in the Global South than the United States and its allies. Like most UN institutions, the IPCC research teams are composed of a diverse set of researchers from the UN member states, including China. However, the Chinese government has recommended over 100 Chinese scientists that were appointed as lead authors of IPCC assessment reports.[108] The IPCC reports frequently reference studies conducted in Chinese institutions.[109]

The IPCC process is quite different from the process conducted in academic institutions. Many of the IPCC chairs and vice chairs emanate from social science disciplines, not physical sciences. The current IPCC chair's academic publications focus on energy policy.[110]

The language of the IPCC reports is very different from the language in scientific publications. For instance, the IPCC reports state that human activity is "unequivocally" causing climate change observed in the 20th and 21st centuries.[111] Scientists rarely use phrases like "unequivocally" to describe their theses.

IPCC reports include assessments that are explicitly political statements and inherently cannot be tested by scientific inquiry. For instance, the IPCC Sixth Assessment Report published in March 2023 included a section on "Equity and Inclusion" that stated, "Prioritizing equity, climate justice, social justice, inclusion and just transition processes can enable

106. U.S. National Intelligence Council, Office of the Director of National Security, "National Intelligence Estimate: Climate Change and International Responses Increasing Challenges to US National Security Through 2040," October 21, 2021, page ii. (https://www.dni.gov/files/ODNI/documents/assessments/NIE_Climate_Change_and_National_Security.pdf); U.S. Department of State, Press Statement by Antony J. Blinken, "Intergovernmental Panel on Climate Change Report," February 28, 2022. (https://2021-2025.state.gov/intergovernmental-panel-on-climate-change-report); U.S. Department of State, Press Statement by Antony J. Blinken, "Intergovernmental Panel on Climate Change Synthesis Report," March 20, 2023. (https://web.archive.org/web/20230320195251/https://www.state.gov/intergovernmental-panel-on-climate-change-synthesis-report); The White House, Press Release, "ICYMI: Biden-Harris Administration Leaders Underscore Importance of Global Action to Combat Climate Change on Heels of New IPCC Report," August 11, 2021. (https://bidenwhitehouse.archives.gov/ostp/news-updates/2021/08/11/icymi-biden-harris-administration-leaders-underscore-importance-of-global-action-to-combat-climate-change-on-heels-of-new-ipcc-report); U.S. Department of Defense, "Department of Defense Climate Adaptation Plan," September 1, 2021. (https://www.sustainability.gov/pdfs/dod-2021-cap.pdf); U.S. National Intelligence Council, Office of the Director of National Security, "National Intelligence Estimate: Climate Change and International Responses Increasing Challenges to US National Security Through 2040," October 21, 2021. (https://www.climate.mil/docs/NIE_Climate-Change-National_Security_2021.pdf)

107. Hector Pollitt, Jean-Francois Mercure, Terry Barker, Pablo Salas, and Serban Scrieciu, "The role of the IPCC in assessing actionable evidence for climate policymaking," *npj Climate Action*, January 15, 2024. (https://www.nature.com/articles/s44168-023-00094-x)

108. For instance, the co-chair of the IPCC Working Group that focuses on the physical science of climate is a Chinese national. International Panel on Climate Change (IPCC), "Prof. Zhang Xiaoye Curriculum Vitae," January 15, 2025. (https://apps.ipcc.ch/fp/_readcv.php?t=CV_a126d4d1-88b7-4778-9229-10510bb132ce.pdf); Yun Gao, "China's response to climate change issues after Paris Climate Change Conference," *Advances in Climate Change Research*, October 27, 2016, pages 235-240. (https://www.sciencedirect.com/science/article/pii/S1674927816300727)

109. The Chinese National Academy of Sciences is among the top 15 institutions most cited in the IPCC 2021 report. Articles published in China were the source of 1,000 citations out of 13,500 citations in the report. Sarah Connors and Felix Chavelli, "Guest post: What 13,500 citations reveal about the IPCC's climate science report," *Carbon Brief* (UK), March 16, 2023. (https://www.carbonbrief.org/guest-post-what-13500-citations-reveal-about-the-ipccs-climate-science-report)

110. "Profile: Jim Skea," *The Intergovernmental Panel on Climate Change*, accessed February 5, 2025. (https://www.ipcc.ch/people/jim-skea)

111. The Intergovernmental Panel on Climate Change, "Summary for Policymakers," *Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, May 24, 2022. (https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf)

adaptation and ambitious mitigation actions and climate-resilient development."[112]

Political goals are presented as based on scientific assessment. For example: "Adaptation and mitigation actions that prioritize equity, social justice, climate justice, rights-based approaches, and inclusivity lead to more sustainable outcomes, reduce trade-offs, support transformative change and advance climate-resilient development."[113] Reports even assign confidence levels to their findings, labeling this one as "high confidence." How did the committee test this thesis? Which scientific methodology was employed? The reports advocate that payment transfers should be made from rich to poor in different locations and from rich states to poor states. It is hard to imagine how this recommendation is the result of scientific testing. The report also states that its scientific inquiry proves (with "high confidence") that "Drawing on diverse knowledges and cultural values," including "Indigenous Knowledge," facilitates climate resilience. Are the authors saying that they took into consideration different cultural views on how the sun, clouds, and water vapor, for instance, impact the earth's climate?

Frequently, there is a major gap between the data presented in the IPCC reports and their interpretation in the executive summaries, which tend to present a much more alarming assessment of the impact of climate change, especially on extreme weather events.[114] Political interests appear to come into play in crafting the executive summaries. Often, UN officials exaggerate the claims in the IPCC reports or remove the probability assessments if they are low.[115] For instance, UN Secretary-General Antonio Guterres frequently refers to current occurrences of natural disasters (e.g., floods, fires, and hurricanes) as resulting from climate change, in contrast to the prevailing UN-published data.[116] Even the United Nations' own IPCC reports assess that in the future — and not the present — climate change will likely affect natural disasters' rates and intensity.[117] The IPCC reports also state that a variety of factors will affect the propensity of flooding and other natural disasters, not only climate change. For instance, the last IPCC report stated, "Several climatic impact-drivers are reliant on many factors beyond their associated primary climatic phenomenon. For example, river flooding is heavily dependent on river management and engineering."[118]

UN agencies cite other UN agencies in their research and analysis since the United Nations houses not only the main analysis on climate but also agencies that produce climate data. The data-providing agencies include the Climate and Air Coalition under the UN

112. The Intergovernmental Panel on Climate Change, "Sixth Assessment Report: Synthesis Report," March 20, 2023. (https://www.ipcc.ch/assessment-report/ar6)
113. "The Intergovernmental Panel on Climate Change," *The Intergovernmental Panel on Climate Change*, accessed February 5, 2025. (https://www.ipcc.ch)
114. Steven F. Hayward, "Who Broke Climate Science?" *Claremont Review of Books*, February 4, 2022. (https://claremontreviewofbooks.com/who-broke-climate-science); Peter Robinson and Steven Koonin,"Hot or Not: Steven Koonin Questions Conventional Climate Science and Methodology," *Uncommon Knowledge with Peter Robinson*, August 21, 2023. (https://www.hoover.org/research/hot-or-not-steven-koonin-questions-conventional-climate-science-and-methodology)
115. John Stossel and Judith Curry, "The Full Judith Curry Interview: Climate Scientist Says World Won't End," *YouTube*, October 3, 2023. (https://www.youtube.com/watch?v=U0PQ1cOlCJI)
116. Bjorn Lomborg, "Opinion: Climate Change Hasn't Set the World on Fire," *The Wall Street Journal*, July 31, 2023. (https://www.wsj.com/articles/climate-change-hasnt-set-the-world-on-fire-global-warming-burn-record-low-713ad3a6); Thomas Frank, "Land use drove California fires more than warming — experts," *Politico*, January 9, 2020. (https://subscriber.politicopro.com/article/eenews/1062029829)
117. Roger Pielke Jr., "What the media won't tell you about ... Wildfires," *Substack: The Honest Broker*, June 8, 2023. (https://rogerpielkejr.substack.com/p/what-the-media-wont-tell-you-about-783)
118. "Climate Change Information for Regional Impact and for Risk Assessment," *The Intergovernmental Panel on Climate Change*, June 9, 2022, page 1777. (https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter12.pdf)

Environmental Program (UNEP)[119] and UNEP's International Methane Emissions Observatory (IMEO).[120] The Oil and Gas Methane Partnership 2.0 also operates under UNEP. The EU Methane Strategy refers to the Climate and Air Coalition data in assessing the impact of methane on warming. The coalition's main financial sponsors are the European Union and the Global Methane Hub, which is an activist organization aimed at eliminating methane emissions. Indeed, the underlying data is provided by organizations with explicit policy agendas.

"A major cornerstone of the UN work on climate change is advocacy for the transfer of funds from the industrialized West to the developing world to address climate change and adopt renewable energy."

Multiple additional UN institutions operate climate programs and activities, not just the explicit climate-devoted programs. They draw funds from governments, international financial institutions, such as the World Bank, as well as companies for climate activity. For instance, the UN Sustainable Development Goals[121] also support climate activity, and the United Nations' work to expand energy access focuses on renewable energy and climate activity.

The United Nations' climate activity also receives grants from member governments, private foundations, and commercial companies. Thus, the United Nations' climate activity has become a valuable source of UN funding and for expanding UN activities.

UN Advocates for Funding From the West to China and the Developing World

A major cornerstone of the UN work on climate change is advocacy for the transfer of funds from the industrialized West to the developing world to address climate change and adopt renewable energy. Differing climate and funding obligations between the developed countries and the developing countries is baked into UN climate treaties and institutions.[122]

The main UN climate treaty — the United Nations Framework Convention on Climate Change (UNFCC) — was adopted in 1994.[123] This convention sets obligations to lower greenhouse gas emissions based on a state's level of industrial development. The industrialized countries are also obligated to subsidize the transition of countries that were not industrialized prior to the entry into force of the UNFCC on the assumption that the industrialized countries over the previous century put greenhouse gases into the atmosphere.

Under the UNFCC formula, China was categorized as a non-industrialized country and eligible for subsidies from the West even though in the 1990s, Beijing became a major industrial power, and in 2006, China became the world's largest emitter of greenhouse gases.

The COP framework has established various climate finance funds tasked with raising funding for the developing world to adopt renewable energy, cope with climate change, and lower emissions. In 2010, the COP16 established the Green Climate Fund (GCF),[124] which has disbursed over $15 billion to various countries for climate adaptation. The COP

119. "Climate and Clean Air Coalition to reduce short-lived climate pollutants," *Climate and Clean Air Coalition*, accessed February 5, 2025. (https://www.ccacoalition.org)
120. "About IMEO," *United Nations Environment Programme*, accessed February 5, 2025. (https://www.unep.org/topics/energy/methane/international-methane-emissions-observatory/about-imeo)
121. United Nations Department of Economic and Social Affairs, "Sustainable Development: The 17 Goals," accessed February 5, 2025. (https://sdgs.un.org/goals)
122. United Nations Framework Convention on Climate Change, "Copenhagen Protocol," June 5, 2009. (https://unfccc.int/files/kyoto_protocol/application/pdf/costarica050609.pdf)
123. United Nations Climate Change, "Text of the Convention," March 21, 1994. (https://unfccc.int/process-and-meetings/what-is-the-united-nations-framework-convention-on-climate-change)
124. "About GCF," *Green Climate Fund*, accessed February 5, 2025. (https://www.greenclimate.fund)

body has also established two additional funds: the Special Climate Change Fund (SCCF)[125] and the Least Developed Countries Fund (LDCF) to transfer money to the developing world for climate coping.[126] The Kyoto Protocol also established the Adaptation Fund.[127]

The new administration needs to identify how and via which organizations U.S. government funding is funneled. Some of it is indirect. The executive director of one of these funds — the GCF — stated that "climate finance involves millions of organizations, and it is not solely managed by climate-related bodies."[128] If the United States wants to grant funding or loans to countries, it should do so directly and not through the UN agencies.

The War on Gas

For decades, switching from coal to natural gas in power production was considered the fastest and cheapest way to lower air pollution and carbon emissions.[129] However, in recent years, the main forces promoting a transition to renewables have advocated eliminating the use of all fossil fuels, including natural gas. This policy is ungrounded, serves China's interests, weakens America's electricity sector, and harms the energy security of U.S. allies. A significant reduction in natural gas consumption would lead to global power outages and fertilizer shortages but would hardly change the climate trend (using mainstream climate knowledge) since natural gas's contribution to greenhouse gases is quite small. A war on natural gas emerged in 2018 and has implications for U.S. energy and national security.

Natural Gas: From Darling to Devil

Natural gas is the main source of electricity production[130] in the United States. It is essential for the production of over half of the world's fertilizer supply.[131] And natural gas has been the fastest-growing fuel[132] in the second half of the 20th century and the first quarter of the 21st century. During this period, consumers were especially attracted to natural gas due to its low air pollution impact, low carbon emissions, and the flexibility that allows it to work well together (by serving as a baseload provider) with renewable energy in electricity provision. For decades, the United States, the European Union, and the IEA promoted the use of natural gas, especially as an alternative to coal power, as the best way to lower

125. United Nations Climate Change, "The Special Climate Change Fund (SCCF)," accessed February 5, 2025. (https://unfccc.int/topics/climate-finance/resources/reports-of-the-special-climate-change-fund)
126. United Nations Climate Change, "Least Developed Countries (LDC) Fund," accessed February 5, 2025. (https://unfccc.int/process-and-meetings/bodies/funds-and-financial-entities/least-developed-countries-ldc-fund)
127. United Nations Climate Change, "Adaptation Fund," November 14, 2024. (https://unfccc.int/Adaptation-Fund)
128. "GCF Executive Director: Meeting climate finance needs of developing countries is crucial," *Azertag* (Azerbaijan), November 14, 2024. (https://azertag.az/en/xeber/gcf_executive_director_meeting_climate_finance_needs_of_developing_countries_is_crucial-3280376)
129. International Energy Agency, "The Role of Gas in Today's Energy Transitions," July 11, 2019. (https://iea.blob.core.windows.net/assets/cc35f20f-7a94-44dc-a750-41c117517e93/TheRoleofGas.pdf); Michael Stoppard, "The role of gas in the energy transition," *S&P Global*, March 13, 2024. (https://www.spglobal.com/en/research-insights/special-reports/look-forward/the-role-of-gas-in-the-energy-transition)
130. International Energy Agency, "Frequently Asked Questions: What is U.S. electricity generation by energy source?" February 29, 2024. (https://www.eia.gov/tools/faqs/faq.php?id=427&t=3;%20https://www.iea.org/commentaries/natural-gas-is-now-stronger-than-ever-in-the-united-states-power-sector); Aloys Nghiem, Keith Everhart, Eren Cam, and Gergely Molnar, "Natural gas is now stronger than ever in the United States power sector," International Energy Agency, December 4, 2023. (https://www.iea.org/commentaries/natural-gas-is-now-stronger-than-ever-in-the-united-states-power-sector)
131. "Advancing America's Agriculture: The Value of Natural Gas to U.S. Agriculture and Agrochemicals," *American Gas Association*, March 2023. (https://www.aga.org/wp-content/uploads/2023/03/Advancing-Americas-Agriculture-The-Value-of-Natural-Gas-to-U.S.-Agriculture-and-Agrochemicals.pdf); Shikha Singh and Hwee Hwee Tan, "High natural gas prices could lead to spike in food costs through fertilizer link," *S&P Global*, January 19, 2022. (https://www.spglobal.com/commodity-insights/en/news-research/blog/agriculture/011922-fertilizer-costs-natural-gas-prices)
132. The University of Chicago Energy Policy Institute, "Fossil Fuels," accessed February 5, 2025. (https://epic.uchicago.edu/area-of-focus/energy-markets/fossil-fuels)

air pollution and carbon emissions. The United States demonstrated the benefit of this approach during the 2010s as its use of natural gas went up, coal went down, and emissions declined.[133]

However, in 2018, a huge policy shift took place. The same organizations and countries that had advocated using natural gas came to see it as a major climate threat and wanted to eliminate its use. Climate policy organizations joined in, promoting the claim that methane (the main element in natural gas) caused more climate warming than carbon dioxide (CO2).

This sudden shift in policy regarding natural gas is puzzling. No game-changing scientific assessment of the role of methane in climate change was published. Many scientists were still not certain of the role that methane plays, especially in its interaction with other gases in the atmosphere (such as CO2 and water vapor) and how methane's short lifetime in the atmosphere affects climate change over time.

Even if the climate establishment viewed methane as a significant factor in climate change, it is not clear why it embraced campaigns to eliminate natural gas. Natural gas production and transportation generate only 4 percent of global methane emissions.[134] The fossil fuel industry accounts for 15 percent of global methane emissions.

These campaigns to reduce methane focus on natural gas, which is the main source of U.S. electricity.[135] However, these campaigns ignore methane emissions from non-livestock agricultural activity, such as rice cultivation. Chinese rice cultivation, for instance, produces more methane emissions[136] than U.S. natural gas production and use, but few in the world put pressure on Beijing to cut these emissions.

USA Emerges as the Global Gas Superpower, While China's Gas Imports Increase

The war on natural gas may be more related to the change in the balance of power that took place between the United States and China in the 2010s. Through the use of hydraulic fracturing technologies ("fracking"), in 2011, the United States became the world's top producer of natural gas.[137] In 2017, the United States shifted from a net natural gas importer to a net natural gas exporter.[138]

By contrast, China's natural gas imports rose rapidly. China became the world's top importer of LNG in 2018. By 2023, the United States became the world's top supplier of LNG, while China became the top emitter of carbon dioxide and methane. Beijing made a serious attempt at fracking, but its geology and water shortages were not conducive.[139] If these trends continued, cheap energy could restore the United States to manufacturing primacy, reinforcing its leads over China in military power and scientific innovation.

133. U.S. Energy Information Administration, "Electric power sector CO2 emissions drop as generation mix shifts from coal to natural gas," June 9, 2021. (https://www.eia.gov/todayinenergy/detail.php?id=48296)
134. Elena Belletti, Adam Pollard, Ryan Duman, Fraser McKay, and Nuomin Han, "Mission invisible: Tackling the oil and gas industry's methane challenge," *Wood Mackenzie*, November 2023. (https://www.woodmac.com/horizons/oil-and-gas-methane-challenge)
135. International Energy Agency, "Frequently Asked Questions: What is U.S. electricity generation by energy source?" February 29, 2024. (https://www.eia.gov/tools/faqs/faq.php?id=427&t=3;%20https://www.iea.org/commentaries/natural-gas-is-now-stronger-than-ever-in-the-united-states-power-sector)
136. "Methane Emissions from Rice Cultivation: Flooded Rice Fields," *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual*, September 16, 1997. (https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch4ref5.pdf)
137. U.S. Energy Information Administration, "The U.S. leads global petroleum and natural gas production with record growth in 2018," August 20, 2019. (https://www.eia.gov/todayinenergy/detail.php?id=40973)
138. U.S. Energy Information Administration, "U.S. Energy facts explained: Imports and Exports," July 15, 2024. (https://www.eia.gov/energyexplained/us-energy-facts/imports-and-exports.php)
139. Keith Bradsher, "Natural Gas Production Falls Short in China," *The New York Times*, August 21, 2014. (https://www.nytimes.com/2014/08/22/business/energy-environment/chinas-effort-to-produce-natural-gas-falls-far-short.html)

Up until the late 2010s, the IEA, which the United States and its NATO allies established in 1974 to ensure the West's energy security,[140] touted natural gas replacement of coal-generated power as an effective tool to avert climate change. In its landmark 2011 study, "Are We Entering a Golden Age of Gas?" the IEA stated, "Where gas replaces demand for other fossil fuels (mainly coal), there is a positive effect on emissions of CO2 and pollutants."[141] Subsequent IEA reports in 2016, 2017, and 2018 continued to promote switching to gas.

The IEA's 2019 report on "The Role of Gas in Today's Energy Transitions" remained positive on natural gas, observing that "switching to natural gas yields significant emissions reductions in nearly all cases."[142] However, it says, while Europe and the United States can lower emissions by switching to gas, China and India do not have natural gas and cannot afford to switch to it from LNG.[143] Indeed, the IEA was aware that promoting natural gas is a viable policy for the West but not for China and India.

That same year, the IEA fully shifted its policy on natural gas and came out against its consumption. Additionally, the IEA launched its methane tracker and in 2020 published its first full report on the impact of methane emissions from the oil and natural gas industries.[144]

UN institutions also reversed themselves. Up until then, the United Nations advocated switching to gas to lower emissions.[145] Then, in 2021, the UN COP26 launched the Global Methane Pledge,[146] through which countries declared their intention to reduce their methane emissions.

Environmental organizations simultaneously pivoted to an anti-gas emphasis. The EDF became the most prominent, focusing on eliminating methane emissions from the oil and natural gas industry.[147] Attention to methane emissions from agriculture would have put China in the crosshairs. Yet as noted above, the EDF views China positively. Accordingly, its website mentions that China produces one-third of global carbon emissions but does not mention Chinese methane emissions even once.[148]

Why American Natural Gas and Not Chinese Rice?

The campaign against methane focuses selectively on emissions from the energy industry even though 40 percent of global methane emissions are natural, emanating from rotting vegetation, wetlands, termites, and other factors.[149] An effective campaign would target these sources, not natural gas.

140. "International Energy Association," *International Energy Association*, accessed February 5, 2025. (https://www.iea.org)
141. "Are We Entering a Golden Age of Gas?" *International Energy Agency*, June 6, 2011. (https://www.iea.org/news/iea-special-report-explores-potential-for-golden-age-of-natural-gas)
142. "The Role of Gas in Today's Energy Transitions," *International Energy Agency*, July 11, 2019. (https://iea.blob.core.windows.net/assets/cc35f20f-7a94-44dc-a750-41c117517e93/TheRoleofGas.pdf)
143. Ibid.
144. "Global methane emissions from oil and gas," International Energy Agency, March 31, 2020. (https://www.iea.org/articles/global-methane-emissions-from-oil-and-gas)
145. United Nations, "Millenium Development Goals," accessed February 5, 2025. (https://www.un.org/millenniumgoals)
146. Climate and Clean Air Coalition, "Global Methane Pledge," accessed February 5, 2025. (https://www.globalmethanepledge.org)
147. "Methane Timeline," *Environmental Defense Fund*, accessed February 5, 2025. (https://www.edf.org/methane-timeline); Environmental Defense Fund, "Cutting Methane to Slow Climate Change," accessed February 5, 2025. (https://www.edf.org/issue/methane)
148. U.S. Environmental Protection Agency (EPA), "Importance of Methane," January 3, 2025. (https://www.epa.gov/gmi/importance-methane)
149. Rob Jackson, "Increasing anthropogenic methane emissions agricultural and fossil fuel sources," *Environmental Research Letters*, July 15, 2020. (https://www.researchgate.net/publication/342936613_Increasing_anthropogenic_methane_emissions_arise_equally_from_agricultural_and_fossil_fuel_sources)

Rice cultivation would also be a more suitable target.[150] It accounts for 10 percent of global methane emissions. The reduction of rice cultivation or a change in cultivation methods would cut emissions more than reduced consumption of natural gas. Yet no one is demanding the population of Asia eat less rice or adopt expensive changes to the cultivation process to cut emissions. Nor would China or other Asian nations assent. Yet analogous demands on the United States to give up its main source of electricity seem reasonable.

Methane Geopolitics

Hostility to natural gas, like other components of conventional climate policy, favors China. The five largest methane emitters in the globe are China, India, the United States, Russia, and Brazil.[151] Of those, only the United States and Brazil have made concrete commitments to lower methane emissions. Other large emitters such as Iran have not pledged to reduce methane emissions.

Despite being the world's largest emitter of methane, China does not incorporate methane reduction into its climate policies, including its formal Nationally Determined Contribution (NDC) submitted under the Paris Agreement.

China produces 14 percent of total global methane emissions and 21 percent of energy-related emissions.

The United States produces 9 percent of total global methane emissions and 13 percent of energy-related emissions.[152]

Meanwhile, the Biden administration imposed new limitations on U.S. natural gas production in general and on the natural gas industry's methane emissions in particular.[153] Specifically, the Inflation Reduction Act allocated $1.36 billion to monitor and reduce methane emissions,[154] adding a new layer of bureaucracy to natural gas production. The law also added a tax on methane emissions from oil and natural gas production.[155] As noted above, in 2024, in the name of climate policy, President Joe Biden also halted permits for new LNG exports to countries that do not have a free trade agreement with the United States.[156] The Trump administration is likely to roll back these special limitations on natural gas production.

150. "Methane Emissions from Rice Cultivation: Flooded Rice Fields," *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual*, September 16, 1997. (https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch4ref5.pdf); Ronald Sass and Frank Fisher, "Methane emissions from rice paddies: a process study summary," *Nutrient Cycling in Agroecosystems*, July 1997, pages 119-127. (https://link.springer.com/article/10.1023/A:1009702223478#citeas)
151. U.S. Environmental Protection Agency, Global Methane Initiative, "Importance of Methane," January 16, 2025. (https://www.epa.gov/gmi/importance-methane)
152. International Energy Agency, "CO2 Emissions in 2022," March 1, 2023. (https://iea.blob.core.windows.net/assets/3c8fa115-35c4-4474-b237-1b00424c8844/CO2Emissionsin2022.pdf)
153. The White House, "More than 100 Federal Actions to Curb Methane: A Year of Progress on the U.S. Methane Emissions Reduction Action Plan," November 2024. (https://bidenwhitehouse.archives.gov/wp-content/uploads/2024/11/US-Methane-Action-Plan-2024-Update.pdf)
154. U.S. Environmental Protection Agency, "Methane Emissions Reduction Program," December 20, 2024. (https://www.epa.gov/inflation-reduction-act/methane-emissions-reduction-program)
155. Jonathan Ramseur, "Inflation Reduction Act Methane Emissions Charge: In Brief," *Congressional Research Service*, August 29, 2022. (https://crsreports.congress.gov/product/pdf/R/R47206)
156. The White House, Press Release, "Fact Sheet: Biden-Harris Administration Announces Temporary Pause on Pending Approvals of Liquified Natural Gas Exports," January 26, 2024. (https://web.archive.org/web/20240126102126/https://www.whitehouse.gov/briefing-room/statements-releases/2024/01/26/fact-sheet-biden-harris-administration-announces-temporary-pause-on-pending-approvals-of-liquefied-natural-gas-exports)

Geopolitics of Public Finance

States in the developing world often have difficulty attracting commercial investments in their domestic energy sectors, especially for electricity provision. Instead, they rely on loans and grants from public finance institutions like the World Bank, regional development banks, and foreign aid to develop electricity and other energy supplies for their populations. Yet in 2021, the United States together with the G7 ended finance and loans for fossil fuel-based energy projects, leaving the developing world with few options to finance projects aimed at economic growth and poverty reduction.[157] In 2022, for the first time in a century, the percentage of the global population with access to electricity declined. In 2023, the percentage remained flat.[158] Today, one in 10 people worldwide still do not have access to regular electricity.[159] All this created a geopolitical opportunity for China in the developing world.

In August 2021, the U.S. Department of the Treasury announced guidelines to multilateral development banks — to which Washington is the top donor — stating that the "United States will promote ending international financing of carbon-intensive fossil fuel-based energy."[160] According to the guidelines, the United States will oppose new coal and oil projects while listing narrow criteria for potential aid to natural gas production in cases where there is no renewable energy option. Then Treasury Secretary Janet Yellen said these guidelines "establish a clear path to end Multilateral Development Banks' support for fossil fuels."[161] In 2021, the World Bank stopped financing fossil fuel projects. In 2019, it had already stopped funding for fossil fuel production.[162]

In December 2021, the G7 formally decided to end public finance for fossil fuel projects, including natural gas. At the UK-sponsored COP26 in Glasgow, the signatories declared, "we will end new direct public support for the international unabated fossil fuel energy sector within one year of signing this statement."[163] The European Union began winding down public finance for fossil fuel projects in 2019 at a time when fossil fuels comprised 70 percent of the block's energy consumption.[164]

As a result, China reaped influence by continuing to fund energy projects, while resentment in the developing world toward the West likely grew due to apparent indifference to energy poverty. A lack of reliable power in the developing world has also contributed to political instability. Frequent blackouts often precipitate regime collapse, as was seen in Egypt in the 2010s and in Bangladesh in

157. Jamal Saghir, "Energy and Poverty: Myths, Links, and Policy Issues," *Energy Working Notes*, May 2005. (https://documents1.worldbank.org/curated/pt/544511468313734634/pdf/374810Energy0WorkingNotes1401PUBLIC1.pdf)
158. Laura Cozzi, Daniel Wetzel, Gianluca Tonolo, and Jacob Hyppolite, "For the first time in decades the number of people without access to electricity is set to increase in 2022," *International Energy Agency*, November 3, 2022. (https://www.iea.org/commentaries/for-the-first-time-in-decades-the-number-of-people-without-access-to-electricity-is-set-to-increase-in-2022); Amanda Chu, Aana Adeoye, and Jamie Smyth, "Capital barriers in Africa could 'fracture' the energy transition," *Financial Times* (UK), October 24, 2024. (https://www.ft.com/content/b589f559-2949-4c52-a6e4-86807d04ee15)
159. Energy Institute, "Statistical Review of World Energy," July 26, 2024. (https://www.energyinst.org/statistical-review)
160. U.S. Department of the Treasury, "Guidance on Fossil Fuel Energy at the Multilateral Development Banks," August 2021. (https://web.archive.org/web/20210816172324/https://home.treasury.gov/system/files/136/Fossil-Fuel-Energy-Guidance-for-the-Multilateral-Development-Banks.pdf)
161. U.S. Department of the Treasury, Press Release, "Treasury Announces Fossil Fuel Energy Guidance for Multilateral Development Banks," August 16, 2021. (https://home.treasury.gov/news/press-releases/jy0323)
162. World Bank, Fact Sheet, "Ten Things You Didn't Know About the World Bank Group's Work on Climate Change," October 29, 2021. (https://www.worldbank.org/en/news/factsheet/2021/10/29/10-things-you-didn-t-know-about-the-world-bank-group-s-work-on-climate)
163. UN Climate Change Conference 2021, "Statement on International Public Support for the Clean Energy Transition," *The National Archives, United Kingdom*, April 11, 2021.(https://webarchive.nationalarchives.gov.uk/ukgwa/20230313124743/https://ukcop26.org/statement-on-international-public-support-for-the-clean-energy-transition)
164. Eurostat, "Welcome to eurostat," *European Union*, accessed February 5, 2025. (https://ec.europa.eu/eurostat)

2024.[165] The destabilization of additional states can create security challenges for the United States. The halting of public finance also hit Europe's ability to build natural gas supply infrastructure to diversify its gas suppliers, thus likely increasing future dependence on Russia.

"With the U.S. pivot to Asia, ensuring stable energy supplies for the U.S. military has become even more challenging, as its energy supply lines in East Asia are much longer and shakier than those required for missions in Europe."

Reducing access to fossil fuels does not mean that states will develop more renewable energy. Rather, it will likely lead to an increase in pollution, emissions, and threats to public health since people will burn dung, lump coal, wood, and other biomass to serve basic needs like heating and cooking.

The massive transfers of climate funds to foreign governments and international institutions raise questions of accountability for the uses of these funds. Washington should conduct an inquiry into the World Bank's lack of "accounting" for $41 billion in climate funds and general climate activity.[166]

Operational Energy

Challenges and threats to the U.S. domestic energy supply and to energy supplies for the U.S. military ("operational energy") are likely to increase over the coming years. In contrast to most of the U.S. wars abroad, in which America has benefitted from uninhibited energy supplies to fuel its activity, in upcoming wars, U.S. adversaries plan to disrupt these supplies.[167]

U.S. and global energy security directly affects America's ability to deliver energy to fuel its military operations. The U.S. military's energy supplies run on civilian supply lines, both at home and globally.

With the U.S. pivot to Asia, ensuring stable energy supplies for the U.S. military has become even more challenging, as its energy supply lines in East Asia are much longer and shakier than those required for missions in Europe.[168]

The U.S. military and NATO need to return to the traditional two-sided view of operational energy: to supply energy to support military missions and to deny energy supplies to adversaries in war. In recent years, the United States and its allies have not devoted enough attention to achieving disruption capacity.[169] The Biden administration also hamstrung Ukraine and Israel from disrupting Russia's and Hamas's energy

165. For more on the connection between electricity disruptions and violent regime collapse, see Brenda Shaffer, "A Guide to the Application of Energy Data to Intelligence Analysis," *Studies in Intelligence*, December 2017, pages 47-48. (https://www.cia.gov/resources/csi/studies-in-intelligence/volume-61-no-4/a-guide-to-the-application-of-energy-data-for-intelligence-analysis)
166. Oxfam International, Press Release, "Up to $41 billion in World Bank climate finance unaccounted for, Oxfam finds," October 17, 2024. (https://www.oxfam.org/en/press-releases/41-billion-world-bank-climate-finance-unaccounted-oxfam-finds)
167. Alan Howard, Daniel Nussbaum, and Brenda Shaffer, *Operational Energy* (Berlin: De Gruyter, 2024), pages 94-99.
168. Ibid., pages 47-48.
169. "New York power grid strained by rapid electrification, operator says," *Reuters*, June 7, 2023. (https://www.reuters.com/business/energy/new-york-power-grid-strained-by-rapid-electrification-operator-says-2023-06-07); "2022 Long-Term Reliability Assessment," *North American Electric Reliability Corporation*, December 2022. (https://www.nerc.com/pa/RAPA/ra/Reliability Assessments DL/NERC_LTRA_2022.pdf); Garrett Golding, Emily Ryder Perlmeter, and Prithvi Kalkunte, "Addressing Texas grid reliability: Time to go nuclear?" *Federal Reserve Bank of Dallas*, May 13, 2024. (https://www.dallasfed.org/research/swe/2024/swe2407)

supplies, respectively. This has impinged on Kyiv's and Jerusalem's ability to prevail in their wars.[170]

DOD should return to fuel neutrality. In recent decades, DOD has invested efforts and extensive funds to replace fossil fuels in military missions — with no success. While research should continue on energy innovation, the U.S. military should focus on improving the role of energy in operational readiness and lethality — not lowering the use of fossil fuels.

Hybrid Warfare: Blurred Border Between Domestic Energy and War

As hybrid warfare increases and, consequently, the border between the home front and the battle zone is blurred, U.S. adversaries will increasingly target American domestic energy infrastructure and disrupt energy supplies using both cyber and physical attacks. China, Russia, and Iran openly declare that they plan to disrupt U.S. energy supplies that serve both the U.S. military and the American domestic energy system as part of their asymmetric war with the United States.[171] To make matters worse, there is already a deficit of electricity production. Three out of the four biggest population centers in the United States — California, Texas, and New York — now suffer chronic electricity shortfalls.[172] Additionally, civilian energy infrastructure is more vulnerable than explicitly military infrastructure, with fewer security protocols. Even short-lived electricity disruptions could cause large-scale panic and economic disruption in the United States and hurt American public support for military operations abroad.

Adding to energy supply deficits in the West, a crisis may emerge in manpower and capacity for nuclear power generation, as joining the nuclear sector in the military will not be attractive with few prospects for employment in the declining civilian sector. Meanwhile, China and Russia continue to maintain and increase their nuclear capacity. Their state-owned companies are building most of the world's new nuclear energy capacity. If this trend continues, the West may not have adequate qualified manpower to maintain a nuclear energy industry and the nuclear-powered fleet in the U.S. Navy (aircraft carriers and submarines).

Policy Recommendations

Reliable Data Is a Must

The first step in correcting international energy policies is ensuring the most reliable data is available to the U.S. government and the American public. The most influential sources of analysis and policy prescriptions are not objective scientific organizations. The most glaring example is the United Nations. The Trump administration should conduct independent climate assessments and not rely on the UN reports, nor should it allow U.S. agencies to refer to UN assessments on climate as independent, apolitical scientific reports.

The United Nations produces the most influential syntheses of climate science and related prescriptions even though it is an inherently political organization. Washington should thus challenge the role of the United Nations on climate policy and vastly reduce funding to its climate-related activity, including

170. Alan Howard and Daniel Nussbaum, "Destroying the Enemy's Energy Supplies in the Twenty-First Century," *Operational Energy* (Berlin: De Gruyter, 2024), pages 100-105; Alan Howard and Brenda Shaffer, "Washington Denies a Bedrock of War Fighting," *Real Clear Energy*, March 27, 2024. (https://www.realclearenergy.org/2024/03/27/washington_denies_a_bedrock_of_warfighting_1020943.html)
171. Alan Howard, Daniel Nussbaum, and Brenda Shaffer, *Operational Energy* (Berlin: De Gruyter, 2024), pages 94-99.
172. "New York power grid strained by rapid electrification, operator says," *Reuters*, June 7, 2023. (https://www.reuters.com/business/energy/new-york-power-grid-strained-by-rapid-electrification-operator-says-2023-06-07); "2022 Long-Term Reliability Assessment," *North American Electric Reliability Corporation*, December 2022. (https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2022.pdf); Garrett Golding, Emily Ryder Perlmeter, and Prithvi Kalkunte, "Addressing Texas grid reliability: Time to go nuclear?" *Federal Reserve Bank of Dallas*, May 13, 2024. (https://www.dallasfed.org/research/swe/2024/swe2407)

activity sponsored by UN institutions that are not explicitly climate-focused.

Nor should Washington contribute funds through the United Nations to pay for the developing world to increase its use of renewable energy or to lower emissions. The Trump administration should oppose the definition of China as a "developing country" for this activity. If the United States wants to grant funds to foreign countries for energy development, it should do so directly. Relatedly, it should advocate for the G7 to resume public financing of fossil fuel projects that reduce energy poverty in developing nations, including prodding the World Bank to renew funding for fossil fuel projects, especially natural gas.

For decades, the IEA and the U.S. Department of Energy's EIA have been among the most reliable sources of energy data. However, in recent years, the trustworthiness of the data they publish has declined significantly.[173] They have both moved from reporting actual data to presenting the results of scenarios and forecasts. This practice has allowed the IEA and EIA to project a picture of an emerging energy transition to renewable energy that is not based on actual data. The IEA's most recent attempt to distort the picture of the growth of renewable energy was its late 2024 report[174] showing growth in employment in renewable energy but counting informal gatherers of dung, wood, and other biomass as renewable energy workers. The IEA can use the report data to make the claim that there is a massive growth in renewable energy and low-carbon energy even though all it did is reclassify the informal gathering of dung and sticks as employed activity in the energy sector.

The EIA is a U.S. government agency, and the United States is the lead funder of the IEA, providing 14 percent of its annual budget over the last decade and frequently providing additional payments for projects.[175] Washington must demand reliable reporting. If not, the EIA and IEA should lose their funding, or have it significantly reduced.

Congress should hold regular hearings on IEA and EIA data reporting. Relatedly, Washington should press the IEA to stick to its mission of promoting its members' energy security, not promoting a transition to renewables that endangers that security.

The Trump administration's planned appointment of a new EIA administrator is an opportunity to change course at the EIA and return the agency to impartial data collection and analysis. Washington should press institutions and governments in allied countries to present to their publics the true prospects that today's renewable energy can replace fossil fuels. This is essential both as a matter of democratic principle and as a prerequisite for sound policymaking. Specifically, the public should know the true costs of different forms of energy. To that end, U.S. government agencies and multilateral organizations that Washington funds, such as the World Bank, should be obligated to publish the levelized costs of energy and not just generation costs.

Countering Empowerment of U.S. Adversaries

The U.S. Intelligence Community should study the role of energy in the China-Russia-Iran-North Korea alliance and integrate new understandings into its threat analysis. It should also identify potential vulnerabilities in the energy cooperation among China, Russia, Iran, and North Korea and attempt to exploit them.

In addition, the administration should quickly repeal the October 2021 instruction to U.S. agencies and

173. See, for instance, Robert McNally, "Climate Politics Neuters an Energy Watchdog," *The Wall Street Journal*, February 12, 2024. (https://www.wsj.com/articles/activists-neuter-a-global-watchdog-energy-policy-international-energy-agency-1ac4f81b)
174. International Energy Agency, "World Energy Employment 2024," November 2024. (https://www.iea.org/reports/world-energy-employment-2024)
175. Ben German, "Exclusive: IEA defends energy outlooks in letter to GOP," *Axios*, April 10, 2024. (https://www.axios.com/pro/energy-policy/2024/04/10/exclusive-iea-defends-energy-outlooks-in-letter-to-gop)

embassies to refrain from engaging in policy discussions with foreign interlocutors that address fossil fuels.

Additionally, the West should stop allocating massive subsidies for renewable energy capacity and electrification in an attempt to catch up with China in wind, solar, and electric vehicles. If competition is the objective, it is better to invest in innovation and let a new energy system emerge that China does not lead.

Renew Public Finance for Energy in Use Today

The Trump administration should renew the ability of U.S. government agencies to grant loans and other public finance for fossil fuel projects, especially natural gas. As the World Bank's largest shareholder, the United States should also strongly encourage the World Bank to change its policy on lending for fossil fuel projects.

The Trump administration should pay special attention to the funding practices of the U.S. Agency for International Development. The agency was particularly active under the Biden administration in promoting a flawed climate policy in foreign countries.

The new administration should also investigate the World Bank's inability to account for $41 billion allocated for climate projects.[176]

Improve the Energy Security of U.S. Allies

The energy policies of U.S. allies are raising electricity costs, contributing to significant economic downturns, and reducing their manufacturing capacity. The administration needs to conduct open, evidence-based discussions with allies on energy and climate policies. Natural gas would be a good focus for initial talks. While natural gas emissions contribute little to climate change, Europe and other U.S. allies have enacted policies against the use of natural gas.

At the same time, the Trump administration needs to confront the damage done to the perception of the United States, especially by allies and partners, as an unreliable energy supplier. With each change of administration, dramatic swings take place in U.S. energy policies. Following the Biden administration's January 2024 halt of new LNG export permits for countries that do not have most favored nation trade status, several U.S. partners forged new supply contracts with Qatar and other Middle Eastern producers. The importing countries understood that even if a new U.S. administration ends the halt, it could be renewed under a subsequent administration. The United States needs to shore up its image with allies and partners as a reliable energy supplier and implement energy policies that are not easily reversible with each change of administration or Congress. The administration should seek to amend the Natural Gas Act to eliminate the free trade/non-free trade distinction. No other commodity has this constraint.

Return Energy Security to National Security Policy

The administration's National Security Strategy and National Defense Strategy should address energy security as it relates to the fuels that are in use today — chiefly fossil fuels.

The new administration should also review all DOD activity on climate change and consider limiting it to work that is connected to core military missions. Rising sea levels are not exclusively a result of climate change, and the U.S. Navy should plan its assessments on changing sea levels based on all factors.

The Navy should restore freedom of navigation of the globe's key waterways and maritime chokepoints.

176. "Almost 40% of World Bank's Recent Climate Funds Unaccounted For: Oxfam," *Agence France-Presse* (France), October 16, 2024. (https://www.barrons.com/news/almost-40-of-world-bank-s-recent-climate-funds-unaccounted-for-oxfam-3b985301)

Roll Back Government Subsidies and Refrain From Picking Technologies

Finally, the Trump administration should pursue a fuel-neutral energy policy. The administration should not promote or ban certain fuels. Rather, policy decisions should be based on assessments of the best fuel choice that balances economic, national security, energy security, environmental, and public health interests. In certain situations, fossil fuels will provide the best results. In other cases, it will be nuclear or renewable energy. In most cases, a diversified fuel mix best promotes energy security and multiple national interests.

The new administration should roll back Biden-era subsidies, even if they deliver benefits to some of the administration's supporters in red states or the energy industry.

The new administration should also refrain from picking technologies for support. The private market will do a much better job at it. For example, the Biden administration allocated $60 million dollars in tax credits and subsidies to the green hydrogen industry, yet this investment is not likely to generate any commercially sustainable production of green hydrogen.[177] The government should spur energy innovation by funding research and development and not by mandates and subsidies for certain forms of energy.

The Biden-era Inflation Reduction Act was an attempt to forge an American industrial policy. Government-driven industrial policies undermine America's economic comparative advantage, which is the strength of its private sector and its time-proven ability to correctly allocate capital to investments and innovation. The United States should stay away from government-driven industrial policies, except in wartime.

Electricity

Washington should halt policies aimed at expanding the electrification of key economic sectors. Centralization of the economy on one type of energy undermines diversification, a key principle of energy security.

The United States also needs to refrain from policies that weaken U.S. electricity reliability and raise the cost of production. The United States will lose its manufacturing edge if its power prices rise significantly.

Electrification of the battlefield should be advanced only in cases where that best serves the U.S. military's missions and not due to climate policy or other non-military goals.

Categorization

U.S. agencies, such as the U.S. Environmental Protection Agency, should reverse categorization and reference to carbon dioxide and methane as "pollution." U.S. government officials and agencies should refrain from referring to renewable energy and low-carbon energy as "green energy." As shown in this study, renewable energy often has a high environmental impact. Low-carbon energy should not be referred to as "clean energy" but simply as low-carbon.

177. U.S. Department of Energy, "DOE Announces Nearly $60 Million to Advance Clean Hydrogen Technologies and Improve the Electric Power Grid," May 22, 2023. (https://www.energy.gov/articles/doe-announces-nearly-60-million-advance-clean-hydrogen-technologies-and-improve-electric); Will Mathis, "Green Hydrogen Hype Fades as High Costs Force Project Retreat," *Bloomberg*, October 3, 2024. (https://www.bloomberg.com/news/articles/2024-10-03/green-hydrogen-hype-fades-as-high-costs-force-project-retreat); David R. Baker, "Green Hydrogen Hype Is Giving Way to Reality," *Bloomberg*, December 23, 2024. (https://www.bloomberg.com/news/newsletters/2024-12-23/green-hydrogen-hype-is-giving-way-to-reality)

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