

24 Pro-poor fossil fuel subsidy reform

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Subsidies and other types of public financial support for fossil fuels are often defended as necessary to ensuring an affordable supply of energy. However, they are a costly and inefficient way to help the poor given that the wealthy who consume the most energy benefit most. This chapter discusses how reforming or eliminating fossil fuel subsidies could free up revenues that could be redirected to poverty reduction and investments in clean energy. It includes examples of successful reforms in countries, including of Argentina, Bangladesh, Sri Lanka and Zambia. Indonesia's reform compensated households with a cash transfer programme that cost less than the subsidies, and India's phased reduction of fuel subsidies paralleled a tripling of its public investment in renewable energy. The chapter then examines how to reform fossil fuel subsidies effectively to contribute to a just transition. It concludes with a set of recommendations for development co-operation actors.

Key messages

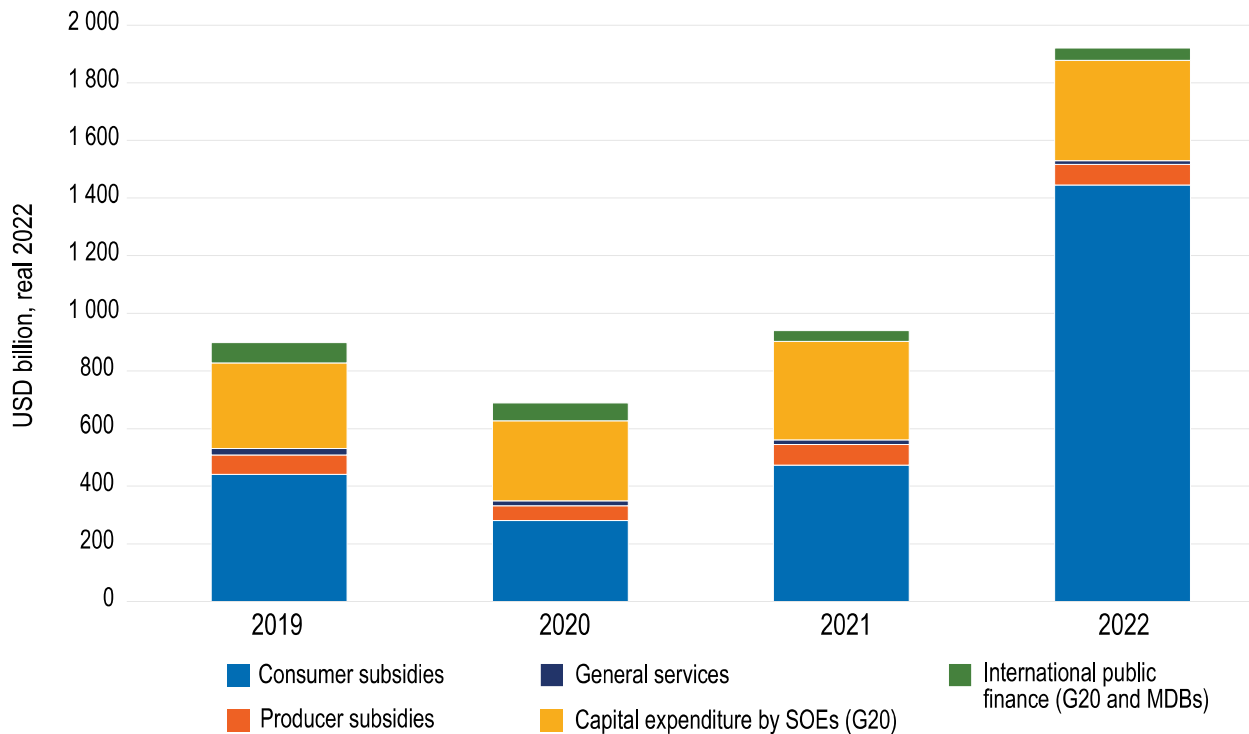
- Phasing out support for fossil fuels is challenging – consumers do not want higher prices and producers vigorously defend access to incentives – but doing so can free up vast revenues that can be redirected to targeted social welfare and poverty reduction and investment in renewable energy.
- Fossil fuel subsidy reform can be achieved without worsening poverty and inequality if a portion of the subsidy savings is used to compensate low-income households and vulnerable businesses, for instance through cash transfers.
- Subsidy reform can actually *reduce* poverty and inequality when a larger share of the savings is directed towards poverty reduction programmes.
- The international community should redirect international public financial flows away from fossil fuels and support governments to implement pro-poor fossil fuel subsidy reform roadmaps as part of their nationally determined contribution (NDC) commitments.
- Development actors can support countries to develop detailed subsidy reform plans and transition roadmaps based on national policies and contexts by providing technical assistance in the form of expertise, capacity building for relevant ministries and policy design based on best practice.

Redirecting public financial support from fossil fuels to renewable energy would unlock much-needed funding for the SDGs and the green transition

Government support for fossil fuels – including subsidies, public financing and investments by state-owned enterprises (SOEs) – is frequently defended as necessary both for development and to provide reliable and affordable energy. However, public financial support drives the use of fossil fuels that exacerbate air pollution and climate change while perpetuating reliance on price-volatile and geopolitically risky forms of energy. All of these impacts undermine development goals, particularly air pollution and climate change, which have been demonstrated to have the largest impact on the poorest (Rentschler and Leonova, 2023^[1]; Taconet, Méjean and Guivarch, 2020^[2]). Universal subsidies for energy consumption are also an inefficient and therefore costly way to address poverty and inequality given that the wealthy use the most energy and thus harness the largest share of support (Coady, Flamini and Sears, 2015^[3]). In the case of gasoline subsidies, for example, the richest 25% of the population receives 20 times the subsidy benefit of the poorest 25% (del Granado, Coady and Gillingham, 2012^[4]).

Continued fossil fuel support also contradicts governments' commitments, made and regularly reaffirmed at international summits over the past 15 years, to phase out inefficient fossil fuel subsidies, such as those that encourage wasteful consumption.¹ Governments pledged under Article 2.1.c. of the Paris Agreement to make “finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development” (UNFCCC, 2015^[5]). Under the Clean Energy Transition Partnership (CETP), launched in 2021, 41 governments, public finance institutions and multilateral development banks (MDBs) also committed to end international public financing for fossil fuels.²

Yet, public support for fossil fuels in all countries, regardless of income level, reached a record USD 1.9 trillion in 2022, primarily in the form of subsidies (USD 1.4 trillion) to lower consumers' costs of fuels, electricity heating and transport in response to the energy crisis (IISD and OECD, 2024^[6]). Around one-quarter of total public financial support (USD 443 billion of the total USD 1.9 trillion) facilitated new fossil fuel production through subsidies for producers (USD 71 billion) (IISD and OECD, 2024^[6]); international public financing (USD 43 billion) (Oil Change International, 2024^[7]); and capital investments by SOEs (USD 350 billion) (Laan et al., 2023^[8]).

Figure 24.1. Public financial support for fossil fuels, 2022

Note: MDB: multilateral development bank; SOE: state-owned enterprise.

Source: Subsidies: IISD and OECD (2024^[6]), *Fossil Fuel Subsidy Tracker (database)*, <https://fossilfuelsubsidytracker.org>; international public financing: Oil Change International (2024^[7]), *Public Finance for Energy Database*, <https://energyfinance.org/#/data>; capital investments by SOEs: Laan et al. (2023^[8]), *Burning Billions: Record Public Money for Fossil Fuels Impeding Climate Action*, <https://www.energypolicytracker.org/burning-billions-record-fossil-fuels-support-2022>.

Phasing out support for fossil fuels would free up substantial revenues that could be used for targeted social welfare and a just transition to clean energy. The International Monetary Fund (IMF) has estimated that reforming subsidies and increasing taxes on fossil fuels to reflect social costs could raise USD 3 trillion a year by 2030 in 121 emerging and developing economies – an amount broadly in line with their additional spending needs for the SDGs (Black et al., 2023^[9]). Separately, a study of 96 developing countries found that fossil fuel subsidies exceeded official development assistance in 59% of the countries in 2015, i.e. for these countries, eliminating fossil fuel subsidies would generate more revenue than that provided by all donors combined (McCulloch, 2017^[10]). The situation is unlikely to have improved given that global fossil fuel subsidies tripled from around USD 0.5 trillion in 2015 to USD 1.5 trillion in 2022 (IISD and OECD, 2024^[6]).

At the 2023 United Nations Climate Change Conference, COP28, governments committed to triple current levels of renewable energy capacity (United Nations, 2023^[11]). Doing so would require an investment of USD 12 trillion in the power system from 2024 to 2030, but the world is only on track to invest USD 6.6 trillion over that period, leaving an investment shortfall of just over USD 5 trillion (Grant et al., 2023^[12]). The public sector has a pivotal role to play in shifting investment by sending the right signals (including by raising fossil fuel prices through subsidy reform and taxation) and implementing enabling policies for renewables and related infrastructure, including from fossil fuel subsidy reform.

Subsidy savings can be used to ease impacts of reforms and boost public support

Being frequently used as a social or industrial support instrument, particularly in countries without comprehensive tax and social welfare systems, reforming support for fossil fuels can be challenging. While the poor use less energy than the wealthy, energy can constitute a larger proportion of their total expenditure (Coady, Flamini and Sears, 2015^[3]). Targeted compensation such as cash transfers funded from subsidy savings is therefore needed to alleviate negative impacts and generate political support. Economic modelling by the Asian Development Bank (2016^[13]) showed that directing fossil fuel subsidy savings to cash payments, infrastructure, health and education, for instance, can create net benefits for economic growth, equality and poverty reduction.

These challenges appear both when supporting consumption and production and can indeed constitute a major barrier to reform (McCulloch, 2023^[14]). On the consumption side, maintaining below-market fossil fuel prices is often seen as part of the social contract in many producing nations, and citizens in most countries expect governments to intervene to protect them from price spikes, such as during the recent energy crisis. All actors, particularly civil society and governments, could better educate the public that social welfare and income tax cuts, when possible in the context of domestic tax systems, are more effective in delivering cost-of-living support. According to a recent study, a commitment to reinvest subsidy savings in public services (education, health or cash transfers) can double public support for reform (World Bank Group, 2023^[15]). On the production side, governments should disentangle themselves from vested fossil fuel interests – that is, donations and lobbying from the private sector, fossil fuel assets and SOEs, and dependence on fossil fuel revenues.

Successful reforms in developing countries have led to significant public expenditure savings and increased support to social sectors

Between January 2015 and May 2020, at least 53 countries implemented some kind of fossil fuel consumer subsidy reform or increased taxes on fossil fuels (Sanchez et al., 2020^[16]). The 2021-22 global energy crisis prompted many countries to re-establish consumer energy subsidies (IISD and OECD, 2024^[6]). Nevertheless, recent examples of reforms or planned reforms have been observed in several emerging economies. In most cases, these were in response to loan conditions by the IMF, which encourages carefully planned fossil fuel subsidy reform (IMF, n.d.^[17]). Some examples include:

- **Argentina** is phasing out natural gas subsidies from 2022 to 2024 to comply with its IMF loan programme. Subsidies will be targeted through volumetric consumption to the most vulnerable sectors in selected and only in certain geographies (Buenos Aires Times, 2024^[18]).
- **Bangladesh**, also under an agreement with the IMF, began subsidy cuts in 2022 for the energy sector by raising the prices of fuel oil, natural gas and electricity. Prices are now nearly at market rates, and a review will determine if social safety nets need to be strengthened (IMF, 2023^[19]).
- **Colombia** began increasing gasoline prices in 2022 to reduce the fiscal burden of subsidies and allow market pricing. Diesel prices remain unchanged at the time of writing because of ongoing protests. To avoid high gasoline prices, some private vehicle owners are switching to cheaper natural gas as an alternative (Botero, 2024^[20]). The government committed to increase prices for diesel starting in 2024 (Botero, 2024^[20]).
- **Sri Lanka** reduced subsidies during 2022 and 2023 for transport fuels and electricity while strengthening social protection through cash transfers under its loan agreement with the IMF (IMF, 2023^[21]; Rajawasam, 2024^[22]).

- **Zambia** removed inefficient fuel subsidies in 2021 in the power and farming sectors under the conditionality of an IMF loan. The government reinvested the subsidy savings in social expenditure, notably to make secondary education free (IMF, 2022^[23]; Mfula, 2021^[24]).

Further analysis is required to assess whether these specific reforms are pro-poor. However, several studies have looked at the impact of fossil fuel subsidy reforms on poverty using economic modelling simulations or data on household income and expenditure before and after the reforms. Most concluded that fossil fuel subsidy reform without reinvestment of subsidy savings would increase poverty levels, but reallocation of subsidy savings through cash transfers or similar measures resulted in net reductions in poverty³ (Couharde and Mouhoud, 2018^[25]). For example, a study of the Islamic Republic of Iran's 2010 fuel subsidy reforms found that while simply removing subsidies would have increased the national poverty rate by 3.3 percentage points, compensatory cash transfers avoided this potential outcome, ultimately reducing the national poverty rate by 4.7 percentage points (Salehi-Isfahani, Wilson Stucki and Deutschmann, 2015^[26]).

Studies concluded that fossil fuel subsidy reform without reinvestment of subsidy savings would increase poverty levels, but reallocation of subsidy savings through cash transfers or similar measures resulted in net reductions in poverty.

Indonesia, for example, has successfully reduced public support for fossil fuels on several occasions. In 2005, the government developed and implemented an unconditional cash transfer programme to mitigate the impact of fuel prices reform on low-income households (Beaton et al., 2013^[27]). The net savings from the cash transfer programme and subsidy reforms was around USD 2.2 billion: the transfers cost about USD 2.3 billion and subsidy savings were around USD 4.5 billion (Beaton and Lontoh, 2010^[28]). However, retail prices for key fuels remained fixed rather than adjusted to reflect market prices, resulting in a re-emergence of subsidies. When oil prices spiked in 2008, the government raised fuel prices again, but offset the impact with cash transfers and other compensation measures (subsidies for rice, educational support for children and low-interest loans for micro-enterprises) (Beaton and Lontoh, 2010^[28]). In 2015, the government again made deep subsidy cuts, saving approximately USD 15.6 billion, or 10% of all government expenditure (Pradiptyo et al., 2016^[29]). Some of the savings were invested in priority programmes related to education, health insurance, housing, clean water and transportation that directly benefited households (Pradiptyo et al., 2016^[29]). While these measures were successful at the time, the government stopped short of applying market-based pricing for all energy types and subsidies persist for diesel and gasoline, along with coal, electricity and liquefied petroleum gas (LPG) (IISD, 2022^[30]).

Another example is India, which has reduced gasoline, diesel and kerosene subsidies by 59% since 2014 while also tripling public support for renewable energy, particularly utility-scale solar projects, solar irrigation and electric vehicles (Raizada et al., 2024^[31]). Subsidies to LPG were maintained and expanded to encourage households to transition away from traditional solid cooking fuels, which are responsible for high levels of indoor air pollution. A national campaign targeting LPG subsidies to women from low-income households resulted in large-scale adoption of LPG (from 28.5% in 2011 to around 71% in 2020 (Sirur, 2023^[32])) resulting in reduced cooking and cleaning times (Global Subsidies Initiative et al., 2019^[33]).

However, India's subsidies to fossil fuels remain five times higher than those for clean energy (USD 15 billion and USD 3 billion, respectively, in 2023), and it remains to be seen whether the country will stay on the path of subsidy reform. As of early 2024, with global energy prices still elevated, subsidies on several fuels are also re-emerging in India that may unwind its hard-won progress on reform (Raizada et al., 2024^[31]).

How to reform fossil fuel subsidies effectively to contribute to just transitions

A comprehensive approach is needed to ensure that reforms contribute to sustainable poverty reduction and just green transitions. Some countries have removed subsidies opportunistically – a newly elected government with strong political standing taking decisive action, for instance, or a government taking advantage of falling world energy prices to remove subsidies without an increase in consumer prices. However, such reforms are often short-lived. When international energy prices rise again, subsidies return as seen in the examples of India and Indonesia. The energy crisis also saw many developed countries imposing new consumer subsidies (Sgaravatti et al., 2023^[34]). A comprehensive national strategy is more likely to achieve lasting reforms when endowed with the following six elements: 1) planning; 2) consultation; 3) communication; 4) compensation; 5) timing; and 6) institutional reform (Beaton et al., 2013^[27]; IMF, 2013^[35]). Table 24.1 outlines the rationale for each of these elements and how each can help reduce poverty and inequality.

Table 24.1. Six elements of a comprehensive reform strategy

Element	Objective	Poverty- and inequality-reducing elements
Planning	Input from all relevant government agencies is needed to develop a comprehensive reform plan	Ensure that departments dealing with welfare, gender and supporting marginalised groups are involved in designing the reforms
Consultation	Assess all impacts of reform, and foster buy-in from stakeholders	Ensure that social welfare groups are consulted; conduct household surveys of all income groups
Communication	Publicise the benefits of reform to build political and public support	Ensure that poor consumers understand compensation mechanisms and are aware of how to access these
Compensation	Provide targeted assistance to vulnerable consumers and businesses, ideally in advance of reforms to build trust	Ensure that the poor, near-poor and energy-intensive businesses are supported through automatic transfers or easy-to-access support
Timing	Determine whether a rapid or slow phase-out is best based on the type of subsidy, prevailing energy prices and national circumstance	A slow phase-out is generally preferable to allow consumers and businesses to adjust
Institutional reform	Reform pricing mechanisms and state-owned enterprises (SOEs) to ensure subsidies do not re-emerge	SOEs need to have transition plans for employees and consumers impacted by reforms

Source: Based on Beaton et al. (2013^[27]), *A Guidebook to Fossil-Fuel Subsidy Reform for Policy-Makers in Southeast Asia*, https://www.iisd.org/gsi/sites/default/files/ffs_guidebook.pdf.

Recommendations for development co-operation actors

To both reduce fossil fuel dependence and increase investment in renewable energy requires concerted action at global and national levels. Financial support (such as grants and concessional loans), technical assistance, technology transfer and advocacy from the international development community can promote a more equitable distribution of clean energy investment. Currently, investment in clean energy is highly geographically concentrated, with over 90% of the increase in clean energy investment since 2021 occurring in advanced economies and the People’s Republic of China (hereafter “China”) (IEA, 2023^[36]). Without international intervention, low- and middle-income countries may be left behind in the energy transition, with ongoing pollution from fossil fuels, the risk of stranded fossil fuel assets and a lack of domestic clean energy industries.

The IEA estimated that to be consistent with a 1.5°C pathway, investment in clean energy in emerging markets and developing economies needs to more than double from USD 770 billion in 2022 to USD 1.8 trillion to USD 2.2 trillion per year to 2030 (IEA, 2023^[37]), and the increase even is steeper if China is excluded (a fourfold rise from USD 0.26 trillion to USD 0.8-1.1 trillion). Mobilising the revenues needed

for the energy transition requires renewed commitment at all levels. At the international level, donor countries, MDBs and finance agencies should shift support from fossil fuels to clean energy.

1. First, commitments from signatories of the CETP, including MDBs, to end international financing of fossil fuels and ramp up financing for clean energy and just transitions, should be better evaluated ex post. While signatories are required to cease international public financing of fossil fuels within one year of having signed the CETP, five signatories approved at least USD 5.7 billion in fossil finance after that deadline passed (Oil Change International, 2024^[38]), with additional financing provided through financial intermediaries of MDBs (The Big Shift Global, 2022^[39]). In 2022, only two CETP signatories shifted more finance into clean energy than they divested from fossil fuels when compared with their average financing from 2019-21 (European Central Bank, 2020^[40]; Jones and Mun, 2023^[41]).
2. Second, just energy transition partnerships should be better designed, with thorough consultation and substantial resources for economic diversification and transformation for workers and businesses, both formal and informal, affected by energy transition investments. They should also not subsidise any new long-lived gas infrastructure, given the impact of gas on climate, the risk of stranded assets and the likely effect of gas investment delaying the transition to clean energy (Kramer, 2022^[42]).
3. Third, an ambitious outcome is needed for the New Collective Quantified Goal on Climate Finance (NCQG), the new global climate finance goal under the Paris Agreement. The floor for the NCQG has been set at USD 100 billion per year, prior to 2025, but the final amount for the new goal has yet to be determined. Estimates of climate financing requirements vary widely:
 - a. USD 500 billion in 2025 to USD 1.55 trillion by 2030 (UNCTAD, 2023^[43])
 - b. USD 5.8 trillion to meet the needs outlined in the NDCs (UNFCCC Standing Committee on Finance, 2021^[44])
 - c. USD 3.5 trillion to USD 9.2 trillion annually in mitigation spending to reach net zero by 2050, USD 0.05 trillion to USD 1.1 trillion annually for adaptation, and USD 1.1 trillion to USD 2.7 trillion annually for loss and damage (Alayza, 2023^[45]).

Limitations in international agreements on fossil fuel subsidies also need to be addressed, including in commitments by the G7, G20 and the United Nations. International commitments require countries to reform so-called “inefficient” fossil fuel subsidies, and only the G7 has set a concrete deadline of 2025 for when they will implement the commitment. In addition, governments are not required to provide roadmaps for the phase-out of subsidies or even to include a reduction of support to fossil fuels in their NDCs. At the time of writing, only Canada has developed an implementation plan to reform its fossil fuel subsidies and defined “inefficient” according to its national priorities, which unfortunately still leaves the potential for many fossil fuel subsidies to persist or be put in place (Tervit, 2023^[46]). The only allowable subsidies should be for just transitions – aimed at communities and workers, not fuels – and time-limited, targeted support to poor households while social support infrastructure is put into place.

The national level is where reform needs to take place while taking account of national, subnational and local circumstances. The international community can encourage and support countries to raise revenue for social support and a just energy transition through programmes of subsidy phase-out, taxation reform and revenue generation. Development actors can support countries to develop detailed subsidy reform plans and transition roadmaps based on national policies and circumstances.

Countries may need support to identify vulnerable people and businesses and develop targeted assistance measures to address impacts and predict macroeconomic impacts. The IMF and World Bank’s Climate Policy Assessment Tool is an accessible model that can assist policy makers to assess, design and implement climate mitigation policies, including fossil fuel subsidy reform. It also allows policy makers to

examine the impact of policy change, tailored to over 200 countries, including impacts on energy demand, prices, welfare, gross domestic product, inflation, externalities and emissions.

Ideally, support measures would be put in place before prices are increased to build political support for reform and resolve any implementation challenges, including errors of inclusion and exclusion. Fossil fuel subsidy reform and taxation will raise revenue, but these can only be realised after the reforms have been enacted. The international donor community can provide such funding – as the IMF does with its loan programmes – to enable reform. In addition, technical assistance may be needed on the design of the welfare system, as well as the consultation and communications strategies (which should also be developed and implemented well in advance of reforms to reduce the risk of political backlash).

More financial assistance is needed to support international technical assistance for fossil fuel subsidy reform. Currently, the world allocates less than 0.01% of all international aid to try to solve the problem of fossil fuel subsidies (based on the budget for technical assistance in MDBs, inter-governmental organisations and non-government organisations) (McCulloch, 2023^[14]).

Transition plans for national and subnational SOEs are particularly important given their central role in the production and distribution of energy in many developing countries. SOEs are well-positioned to lead in just transition initiatives given they are major employers in the energy sector and often have social objectives alongside financial and energy security goals. Development actors can encourage and support governments to provide firm directives and set realistic targets to SOEs to diversify into clean energy and support fossil fuel dependent communities in the transition. All subsidy and SOE reform plans should be included as commitments in the NDCs.

Both financial and technical assistance from the international donor community can assist low- and middle-income countries to implement these complex reforms, particularly given the challenging circumstances faced by many emerging markets and developing economies of low fiscal capacity, uncomprehensive welfare systems and substantial barriers to the deployment of clean energy (inadequate energy infrastructure, indebted utilities and higher capital costs). In addition, donors can help mobilise climate finance from the Global North to the Global South to support just transitions in energy systems and effective responses to climate change.

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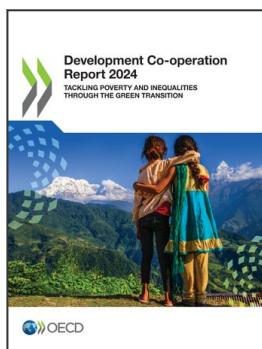
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Notes

¹ Commitments were made at the Asia-Pacific Economic Cooperation summit and the Group of Twenty (G20) meeting in 2009, followed by similar pledges at the G7 meeting in 2022. See: https://www.apec.org/meeting-papers/leaders-declarations/2009/2009_aelm; <https://www.oecd.org/g20/summits/pittsburgh/G20-Pittsburgh-Leaders-Declaration.pdf>; and <https://reliefweb.int/attachments/4c820770-4738-4271-b41d-4288e8daff32/EN.pdf>. In 2015, UN members adopted SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all: <https://sdgs.un.org/goals/goal7>.

² For information on the CETP, see: <https://cleanenergytransitionpartnership.org>.

³ See, for instance, <https://hal.science/hal-04141691>.



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