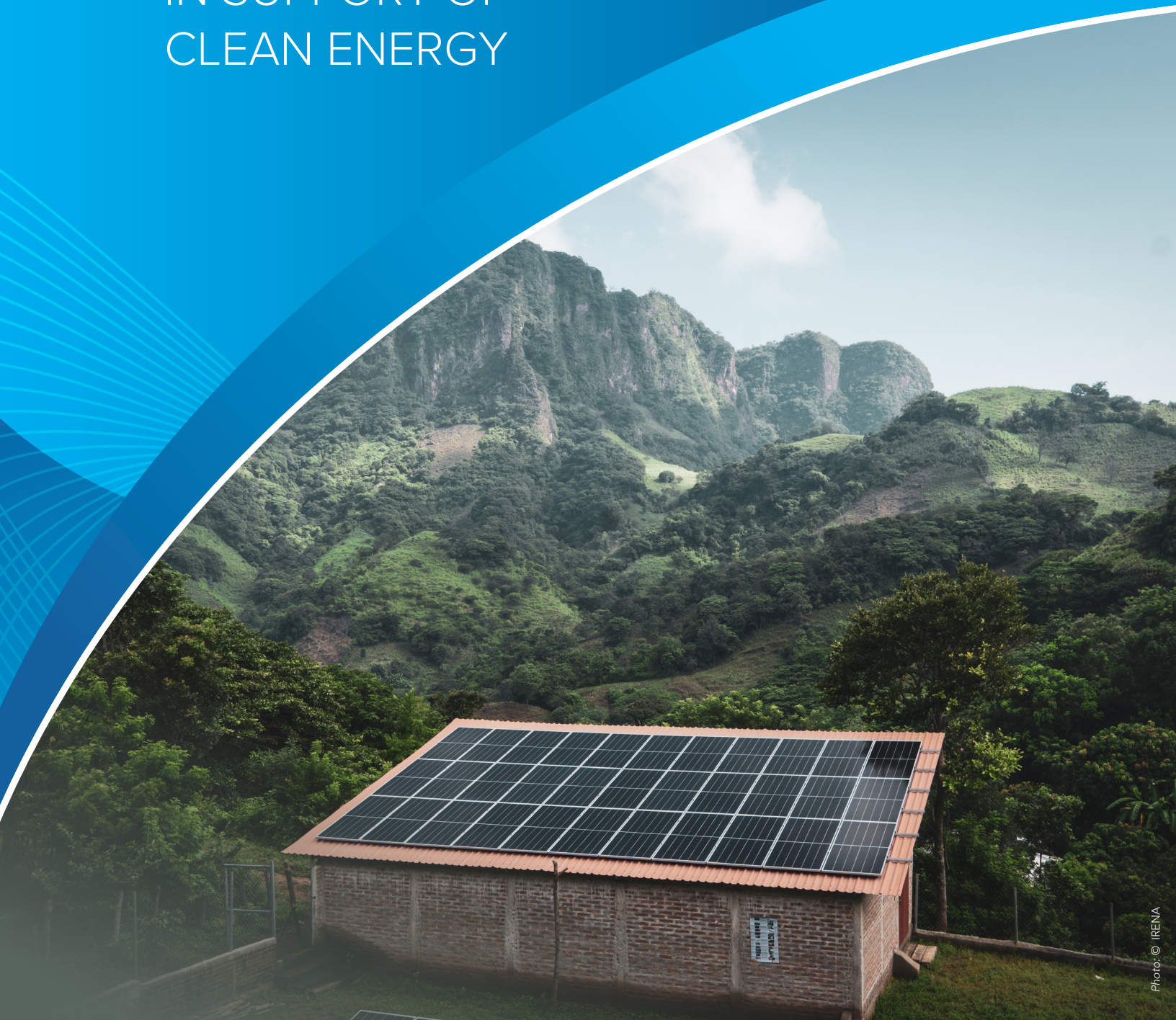


## CHAPTER 5

# INTERNATIONAL PUBLIC FINANCIAL FLOWS TO DEVELOPING COUNTRIES IN SUPPORT OF CLEAN ENERGY



# Main messages

**Global trends.** SDG 7.a.1 shows that international public financial flows rose in 2024 to USD 24.6 billion, up from USD 24.4 billion in 2023. This modest increase follows three years of growth. With development assistance faltering, however, flows may tighten. Of particular concern are the reduced flows to least-developed countries (LDCs), which stood at USD 3.7 billion in 2024, an 11 percent drop from 2023 levels. Public international flows remain of key importance for LDCs, and other developing countries, as they can help bridge structural financing gaps and underpin adequate financing to achieve SDG 7 and the wider 2030 agenda.

**Target for 2030.** Under indicator 7.a.1., no quantitative target has been set for international public financial flows. At USD 24.6 billion in 2024,<sup>26</sup> however, just a percentage point above the 2023 level, the trend shows that the world is failing to meet the goal of international cooperation, which funds clean energy research and technologies for countries in need. The modest growth in 2024 must be understood within the broader financing environment, as total official development assistance (ODA) from Development Assistance Committee (DAC) members fell 6 percent in 2024, the first decline in five years. The slide continued in 2025, revealing a 23.1 percent drop compared with 2024, the largest annual contraction on record. Against the backdrop of the 2026 energy and economic crises, international public finance for clean energy (particularly impact-based concessional loans and grants) will be vital in upholding the commitment to energy development in developing countries and in ensuring they can equitably benefit from the energy transition worldwide.

**Technology highlights.** Among renewable energy technologies, projects attributed solely to solar energy continue to attract the largest share of investments. Their relative proportion has shrunk, however, dropping from 43 percent in 2023 to 30 percent in 2024, or commitments of USD 7.4 billion.<sup>27</sup> Hydropower's share rose from 13 percent to 17 percent over the same period, with flows expanding to USD 4.1 billion. Wind energy, by contrast, declined from 13 percent of total commitments in 2023 to 5 percent in 2024, or USD 1.3 billion. Bioenergy, geothermal, and marine energy together accounted for approximately 3 percent of total flows in 2024. Most growth in 2024 related to multiple/other renewables, rising 50 percent compared to 2023 to reach USD 11.1 billion and accounting for 45 percent of total flows. This category includes projects supporting more than one renewable technology, as well as those lacking sufficient detail for precise technology disaggregation.

**Regional highlights.** The regional distribution of international public financial flows in 2024 remained concentrated: Latin America and the Caribbean, Central and Southern Asia, and Sub-Saharan Africa together accounted for 66 percent of total commitments. Only three regions showed real progress compared with their historic highs. Northern Africa and Western Asia saw a 23 percent increase in 2024, consistent with the growth observed in 2023. Northern America and Europe reached a new peak in 2024 of USD 1.7 billion, a 5 percent increase from the previous year. Oceania saw a more than sixfold rise in commitments, surpassing peak levels in 2016, mainly due to increased flows into Papua New Guinea and the Marshall Islands. Latin America and the Caribbean recorded the largest share at 24

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<sup>26</sup> These figures may be revised upward, as lags in reporting suggest that 2024 commitments are not fully captured in the current data.

<sup>27</sup> Where solar components are embedded within multi-technology projects, and financing cannot be attributed to a single technology, commitments are recorded under multiple/other renewables category to ensure accurate reporting under SDG 7.a.1, which indicates that the true scale of solar-related investment may be somewhat higher than the figure attributed solely to solar suggests.

percent, with flows reaching USD 5.9 billion, more than double the 2023 level, but still below the levels seen in 2014, with support focused on Argentina, Brazil, and Ecuador. In 2024, Central and Southern Asia, Eastern and South-eastern Asia, and Sub-Saharan Africa all experienced a decline in climate finance flows compared to 2023, a concerning trend given that these regions are home to some of the world's least developed countries and most climate-vulnerable populations.

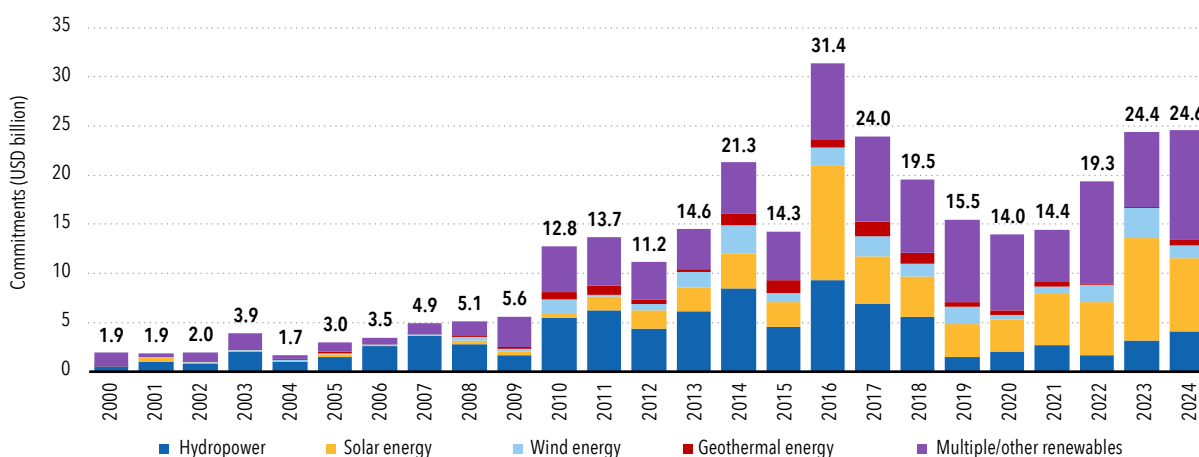
**Commitment distribution highlights.** International public financial flows are still primarily concentrated in a few countries. In 2024, 80 percent of commitments are distributed across 32 countries, up from 28 in 2023. Flows to LDCs fell 11 percent from the 2023 level to USD 3.7 billion, representing only 15 percent of total flows in 2024. Landlocked Developing Countries (LLDCs) attracted more financing than LDCs in 2024, reaching USD 4.6 billion, a 16 percent bump up from 2023. Meanwhile, flows to small island developing states (SIDS) fell 5 percent to USD 585 million in 2024. These three country groups combined received less than 30 percent of total public clean energy flows to developing countries in 2024, despite accounting for over 60 percent of the global population without access to electricity. This misalignment between where energy poverty is concentrated and where finance flows are directed makes bridging the financing gap for LDCs, LLDCs, and SIDS essential to ensuring an equitable energy transition so no country is left behind.

**Financing instruments.** Despite the higher cost of debt caused by persistently high interest rates across developing country markets, debt-based instruments remained the main form of public clean energy finance, accounting for 80 percent of total flows in both 2023 and 2024. Standard loans were the largest instrument in 2024 at USD 14.4 billion (59 percent of total flows), followed by concessional loans at USD 4.8 billion (19 percent). Grants leaped 39 percent year-on-year to reach USD 3.3 billion. This rise increased their share of total flows from 10 percent in 2023 to 13 percent in 2024, reflecting a shift toward more favorable financing terms for recipient countries. Equity financing, by contrast, remained marginal, declining to USD 571 million, or roughly 2 percent of total flows. Of the 65 donors who made commitments in 2024, only 11 provided equity contributions. Dedicated risk-mitigation instruments, including guarantees and credit lines, grew to USD 1.1 billion (5 percent of total flows). Their reach remained limited, however, to just six recipient countries (including two LLDCs), down from ten in 2023. This indicates that public financing, particularly impact-based concessional loans, grants, and support for risk mitigation have not yet scaled with the investment needs of developing countries. Scaling public financing is critical, while finding more effective and efficient ways to use these scarce resources to mobilize private capital. This may require public financing to become more risk-bearing—for instance, by moving beyond traditional debt provision toward a higher share of risk-tolerant equity, guarantees, risk-mitigation instruments, and grants that mobilize private investment.

# Are we on track?

Achieving the 2030 Agenda on time will require a recalibration of the scale and speed at which the international community mobilizes and channels financing for the energy transitions in developing countries. As shown in figure 5.1, international public financial flows to developing countries in support of clean energy reached USD 24.6 billion in 2024, up slightly from USD 24.4 billion in 2023.<sup>28</sup> But this figure remains well below the peak of USD 31.4 billion recorded in 2016, and the modest progress falls well short of the scale and ambition of SDG 7. The shortfall underscores that the world is not on track to meet the 2030 goal to forge international cooperation and to attain access to clean energy research and technologies for countries in need.

**Figure 5.1 • Annual international public financial flows for renewables in developing countries, by technology, 2000–24**



Source: IRENA and OECD 2025.

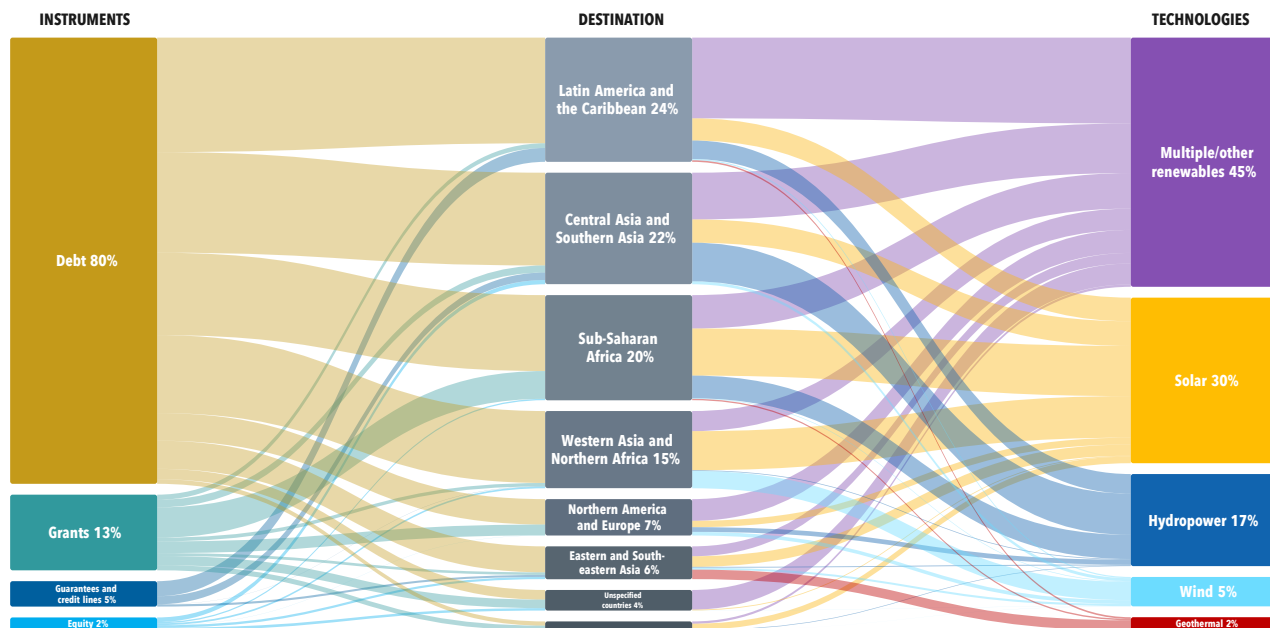
As illustrated in figure 5.2, debt remained the dominant financing instrument in 2024, representing 80 percent of total flows, with grants making up just 13 percent. Geographically, Latin America and the Caribbean received the largest share (24 percent), followed closely by Central Asia and Southern Asia (22 percent) and Sub-Saharan Africa (20 percent). On the technology side, solar energy accounted for 30 percent, hydropower for 17 percent, while multiple and other renewables accounted for 45 percent of flows, reflecting a diversified but still unevenly distributed technology portfolio.

Solar energy continued to account for the largest share of international public financial flows in 2024 (figure 5.2), with projects attributed solely to this technology reaching USD 7.4 billion. But their relative proportion fell from 43 percent in 2023 to 30 percent in 2024. Multiple/other renewables expanded to USD 11.1 billion in 2024 and made up nearly half of total flows. Unlike previous periods when funds categorized as multiple/other renewables temporarily contracted after rapid growth, recent data points indicate widespread expansion across various technologies, mainly driven by the strong rise in financing for projects that combine different renewable energy sources or support enabling energy infrastructure.

<sup>28</sup> Unless stated otherwise, all commitment amounts are expressed in US dollars at 2023 constant prices and exchange rates. Constant amounts are adjusted for inflation rates and changes in exchange rates. Annex 1 provides more information. This edition of the report incorporated additional flows related to new subcategories not considered before, including flows supporting renewable electric power transmission and distribution for centralized grids, as well as technical advisory flows on energy policy and administrative management for renewables. “Changes to the data” section in Annex 1 provides more information on the updated methodology (refer to figure 5.11 and table 5.2).

Commitments to hydropower and geothermal energy also increased over previous years, reaching USD 4.1 billion and USD 0.6 billion, respectively, while wind energy flows fell to USD 1.3 billion. This decline in wind funding coincides with fewer commitments from Japan, which had accounted for 50 percent of the funds in 2023, when flows to wind reached their highest level in over a decade, at over USD 3.1 billion.

**Figure 5.2 • Distribution of international public financial flows for renewables in developing countries by instrument, destination, and technology, 2024**



Source: IRENA and OECD 2025.

Note: Dimensions within each category are ordered from highest to lowest financial flow volume.

At the donor level, the trend showed progress. The European Union recorded a rise in international public financial flows for renewables (USD 1.4 billion).<sup>29</sup> Bilateral flows from Germany (USD 1.7 billion), France (USD 576 million), Norway (USD 200 million), and Denmark (USD 54.5 million) also rose slightly. These incremental gains highlight a structural issue: funding that is concentrated in just a few donors makes the landscape vulnerable to their strategic and budgetary decisions. An expanded donor base is required, along with mobilizing additional finance from the existing donor base.

Total ODA from DAC members fell 6 percent in 2024, marking the first decline in five years, said to be traceable to reduced bilateral aid and limited donor budgets (OECD 2025). The slump continued in 2025, with a 23.1 percent drop compared to 2024, the largest annual contraction on record. This two-year decline has pushed ODA levels back to the start of the 2030 Agenda because bilateral aid and donor budgets have shrunk (OECD 2026). Clean energy flows to developing countries are unlikely to be shielded from this contraction, placing the SDG 7 agenda under pressure precisely when acceleration is most needed.

With the 2030 target date fast approaching, the international community needs to scale up and strategically leverage international public finance for clean energy, particularly in the form of impact-based financing, such as concessional loans and grants for the countries that are furthest behind and least able to attract private investment on their own terms. At the same time, public funds will need to take on greater risks, rather than replicate the risk aversion of private capital, in order to mobilize the investment at the scale required (IRENA and CPI 2025).

<sup>29</sup> This figure covers flows from the European Commission, European Investment Bank, and the European Development Fund.

# Looking beyond the main indicators

This section studies trends in international public financial flows from the perspective of technologies, geographic regions, countries,<sup>30</sup> and financing mechanisms.

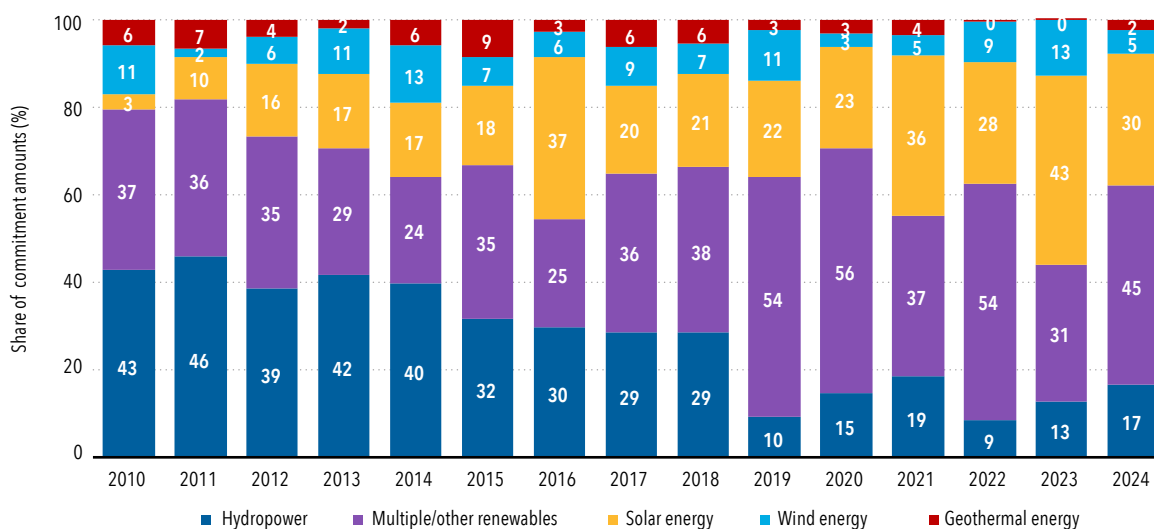
## Technology trends

International public investors categorize flows to clean energy by the type of renewable energy involved: hydropower, solar, wind, geothermal, and multiple/other (figure 5.3).<sup>31</sup>

**Solar energy** remained the leading technology, though its share moderated from about 43 percent in 2023 to roughly 30 percent in 2024, broadly in line with its average share over the past five years. This shift likely reflects the growing integration of solar PV into broader multi-technology projects, rather than a decline in solar investment per se. When solar components are embedded within such projects and financing cannot be exclusively attributed to a single technology, commitments are recorded under the multiple/other renewables category to ensure accurate reporting under SDG 7.a.1. Figures attributed solely to solar components considerably underestimate the true scale of solar-related investment when cross-sectoral contributions are considered.

A total of 436 commitments were made in 2024, amounting to USD 7.4 billion. These commitments ranged from the Europe and Central Asia Renewable Energy Scale-up program at USD 650 million, which is part of Accelerating the Market Transition for Distributed Energy, Türkiye’s Multiphase Programmatic Approach. Financed by the World Bank, the program covers more than 230 smaller commitments. With ticket sizes of USD 1 million or less, many of these commitments supported solar-based isolated grids and standalone systems. The financing structures varied: nearly 90 percent of these smaller solar projects were grant-funded, whereas larger commitments relied on debt financing.

**Figure 5.3 • Share of international public financial flows to renewables, by type of energy, 2010-24**



Source: IRENA and OECD 2025

30 The word country refers to a territory, area, or other unspecified location within the scope of SDG indicator 7.a.1.

31 The multiple/other renewables category comprises unclear commitment descriptions in financial databases and lacks detail on the financial breakdown by technology. It includes bioenergy commitments, which are almost negligible; multipurpose financial instruments like green bonds and investment funds; and commitments targeting a broader range of technologies, such as renewable energy and electrification programs, technical assistance, energy efficiency programs, and other infrastructure supporting renewable energy.

**Wind energy's** share dipped from 13 percent in 2023 to 5 percent in 2024, or USD 1.3 billion for 48 projects. The surge in wind financing in 2023—its highest level over the past decade—was not sustained into the following year. While the year-on-year drop appears sharp, it should be viewed in the context of the broader trend. Wind financing in the 2020s has generally fluctuated within a relatively narrow band, with 2023 representing an exceptional peak rather than a new baseline. In 2024, flows were driven mainly by a large-scale USD 340 million onshore wind project funded by the International Development Finance Corporation in Türkiye, and another USD 297 million project financed by the Japan Bank for International Co-operation in Saudi Arabia.

**Hydropower** edged up from 13 percent to 17 percent, equivalent to USD 4.1 billion. Although hydropower projects commanded higher shares prior to 2019, this was driven by multi-billion-dollar commitments in large-scale hydropower projects. Such large commitments have not been recorded in the past five years (2019–24). For instance, during 2013–18, a total of 10 projects with a ticket size of USD 1 billion or more received funding. In the following six years (2019–24), no projects of such magnitude received international public funds. Although hydropower generation is expected to continue growing in absolute terms across developing economies, its share relative to other renewable energy sources is projected to decline as solar and wind scale up (IRENA 2024).

**Geothermal energy** commitments grew tenfold in 2024, compared to 2023, to USD 594 million, although its share grew only slightly in 2024, still making up a modest 2 percent of the total commitments. While still a fraction of the portfolio, and far below 2010–16 levels, the rise indicates renewed interest in geothermal within the renewable technology mix, driven mainly by projects in China (48 percent of total geothermal commitments) and Indonesia (28 percent).

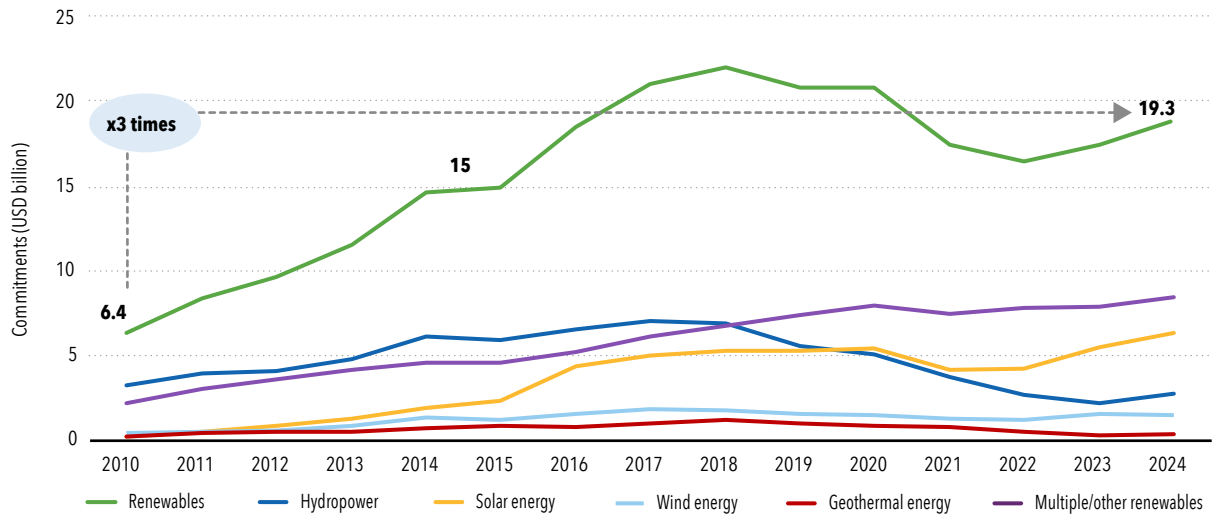
The most notable change between 2023 and 2024 was in the **multiple/other renewables** category, the share of which leapt from 31 percent to roughly 45 percent of total commitments. This is partly due to more donor funding for projects aimed at multiple technologies, and methodological changes in this year's edition, which includes more such projects. The share of this category has grown over time, as it includes commitments for projects where the technology choice is unclear or nonspecific. Such projects tend to target renewable energy technologies without providing technology-specific financial data. This can comprise larger projects involving a combination of renewable energy technologies such as electrification and/or energy efficiency programs, grid transmission, and distribution development.<sup>32</sup> It may also include smaller projects, such as multi-technology technical assistance programs, and multipurpose financial instruments, such as green bonds and the capitalization of investment funds, the proceeds of which support various technologies. Finally, commitments for bioenergy projects, which are almost negligible, are also included here. This technology has the highest proportion of projects with ticket sizes of USD 1 million or less.

Given the wild annual variations in commitments, a moving average smooths out year-on-year fluctuations and reveals the underlying trend (figure 5.4). In 2024, the five-year moving average for all renewables increased again, reaching USD 19.3 billion—three times the 2010 baseline of USD 6.4 billion and around 20 percent more than the 2015 baseline of USD 15 billion—indicating that the upward shift in the trend has been sustained. In 2024, solar and multiple/other renewables were the main drivers of the rising five-year moving average, with both technologies reaching their highest trend levels in the series. The moving averages of hydropower and geothermal slightly increased in 2024 but remained relatively low. In contrast, the moving average of wind dipped in 2024.

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32 Including flows specific to centralized grids and technical advice on energy policy and administration added in this edition of the report.

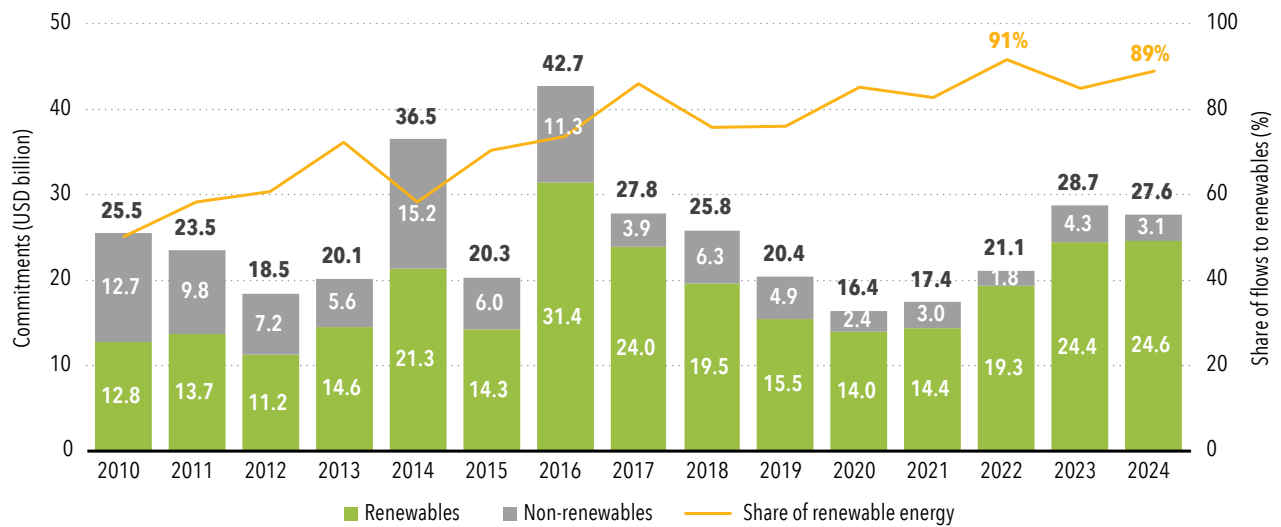
**Figure 5.4 • Five-year moving average of international public financial flows to renewables, by technology, 2010-24**



Source: IRENA and OECD 2025.

In 2024, international public financial flows toward nonrenewables (mainly fossil fuels and nuclear energy) fell to USD 3.1 billion from USD 4.3 billion in 2023 (figure 5.5). The top three recipients of nonrenewable commitments were Viet Nam (29 percent), Ukraine (11 percent), and Nigeria (10 percent). This included a standard loan of USD 872 million for a natural gas power plant in Viet Nam, more than USD 332 million in funds to support Ukraine’s energy infrastructure (primarily supported by European countries), and resilience measures, most of which were grants. Additionally, a Nigerian project worth USD 294 million called Reforms for Economic Stabilization to Enable Transformation. It involved loans for the reform of non-oil revenues and to provide safeguards for oil revenues related to energy generation from nonrenewables. Over the long term, however, the share of renewables in total public financial flows has risen from 50 percent in 2010 to 89 percent in 2024.

**Figure 5.5 • Commitments per year by technology group, 2010-24**

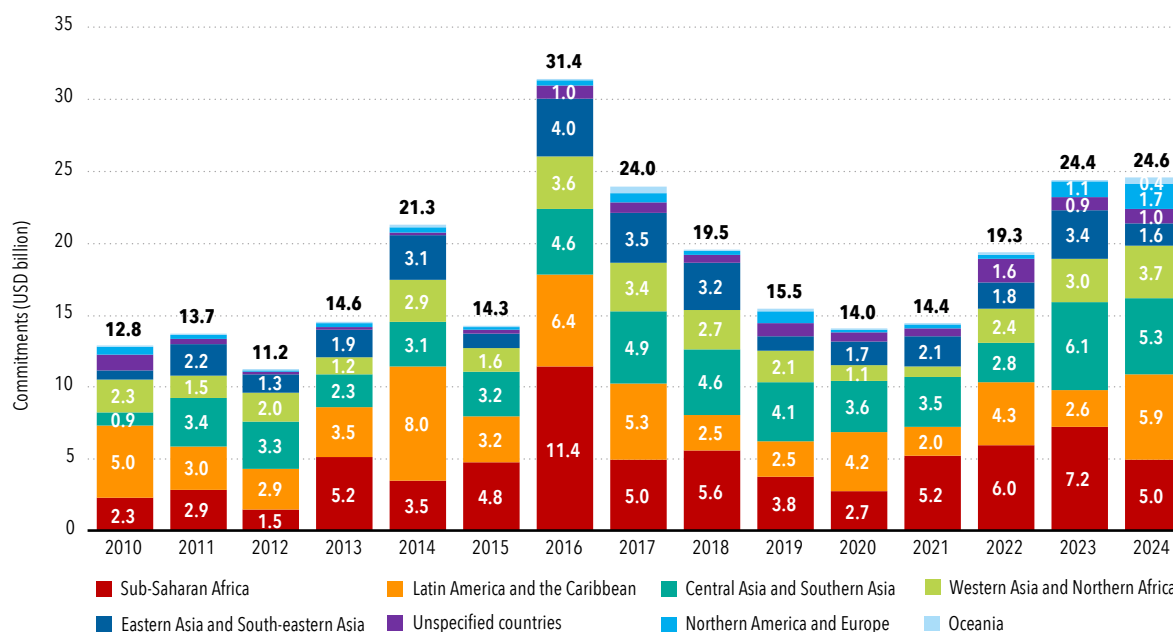


Source: IRENA and OECD 2025.

## Regional trends

International public financial flows to all regions changed markedly between 2023 and 2024. The largest increase came from flows to Latin America and the Caribbean (figure 5.6).

**Figure 5.6 • Annual international public financial flows of renewables, by region, 2010-2024**



Source: IRENA and OECD 2025.

Note: See chapter 7 for the list of countries included in each region.

Compared to their historic peaks, only three regions saw progress in international public financial flows in 2024.

**Western Asia and Northern Africa** saw flows rise to USD 3.7 billion in 2024, up from USD 3 billion in 2023. This ongoing recovery pushes the region to its highest level, surpassing the peak in 2016. Most commitments went to solar (51 percent) and wind (22 percent) projects, while multiple/other renewable energy initiatives made up 26 percent. About a quarter of the region's flows went to Türkiye (37 percent), with Azerbaijan, Egypt, and Morocco among the top four recipients, collectively accounting for 78 percent of the region's funding. Leading donors included the European Bank for Reconstruction and Development (EBRD) and the World Bank, which made record-high commitments of USD 1,083 million and USD 1,073 million, respectively, to the region.

**Northern America and Europe** reached a new peak in 2024 of USD 1.7 billion, a 5 percent gain from the previous year, but they accounted for only around 7 percent of total commitments in 2024. This growth was driven by increased flows to Serbia and Ukraine (more than doubling from 2023 levels), mainly through projects in the multiple/other renewables category (over 60 percent of the region's flows). Major donors to this region include the EBRD, Germany, and the European Union. Saudi Arabia made its first financial commitment to the region by providing a loan to Serbia to support development of the transmission system operator (Saudi Fund for Development 2024).

**Oceania** recorded a sixfold increase in 2024, while remaining a minor recipient, accounting for 1.8 percent of total flows. Despite remaining below USD 0.5 billion, financing levels exceeded the previous peak reported in 2017. Flows were balanced between grants (53 percent) and concessional loans (47 percent). The International Development Association (IDA), the Asian Development Bank, and Australia are major donors in 2024. Around 68 percent of flows went to solar energy, followed by multiple/other renewable energy projects (25 percent) and hydropower (6 percent), mainly supporting Papua New Guinea and the Marshall Islands, the top two recipients in 2024.

One region saw a substantial increase in international public financial flows between 2023 and 2024 but remained well below its peak level.

**Latin America and the Caribbean** flows more than doubled to USD 5.9 billion in 2024, up from USD 2.6 billion in 2023, and held the largest share of total commitments at 24 percent. This marks the region's highest level since 2016 and indicates a rebound after a few years of moderate flows. Approximately 65 percent of financing was allocated to projects involving multiple or other renewable energy technologies. The Inter-American Development Bank and the World Bank remained the two largest providers, jointly accounting for nearly half of total regional flows in 2024. As with 2023, standard loans continued to be the dominant financing instrument, representing 79 percent inflows to the region. Around 58 percent of financing was concentrated in three countries: Argentina (19.9 percent), Ecuador (19.7 percent), and Brazil (17.9 percent).

Three regions experienced a downward correction after strong growth the year prior.

**Sub-Saharan Africa**, where most of the LDCs are located, fell to USD 5.0 billion in 2024, from USD 7.2 billion in 2023. Although still exceeding the levels from 2019 to 2021, this decline interrupts the upward trend of the past three years. Almost 45 percent of the flows went to solar power, followed by hydropower at 22 percent, and multiple/other renewables at 32 percent. Increased funding came from institutions such as the International Development Association (32 percent of the region's flows), China (16 percent), and Germany (12 percent). The region remains the largest recipient of grants in absolute terms—USD 1,324 million. Funding in Sub-Saharan Africa is more dispersed than it is elsewhere; over 80 percent of the funds are distributed across 14 countries and territories.

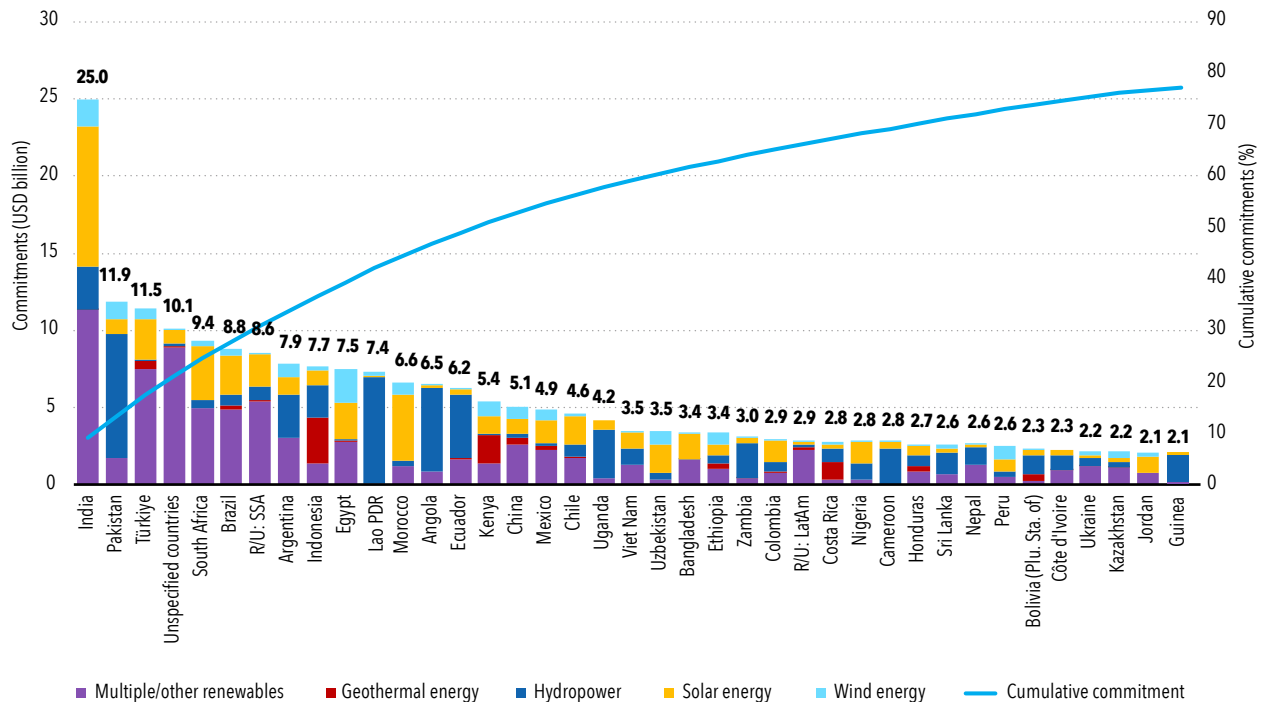
**Eastern Asia and South-eastern Asia** saw commitments decline from 55 percent in 2024—or USD 1.6 billion—compared to USD 3.4 billion in 2023. This marked year-on-year contraction reverses the growth seen in 2023. Commitments to wind energy halved in 2024, while renewable hydropower fell to less than a tenth of the 2023 commitments. Approximately 27 percent of the flows were directed to Thailand, followed by Indonesia (20 percent) and China (19 percent). Conversely, flows to geothermal energy saw a notable increase in 2024, with around half a billion dollars in commitments, notably for China's Shaanxi Energy Transition and Innovation Demonstration project and Indonesia's PT Medco Cahaya geothermal 35 MW power plant.

**Central Asia and Southern Asia** accounted for 22 percent of total flows in 2024, amounting to USD 5.3 billion, mainly driven by commitments to hydropower and multiple/other renewable energy projects. This is a decline from 2023, when approximately USD 6.1 billion was committed. About 63 percent of these flows were concentrated in just three countries: India (32 percent), Pakistan (21 percent), and Uzbekistan (10 percent). The Asian Development Bank, IDA, and Germany were the leading contributors, providing 45 percent of the region's total. Overall, over 83 percent of the region's funding was debt-based, comprising standard loans (51 percent) and concessional loans (32 percent).

## Country trends

From 2010 to 2023, 41 countries and territories received 80 percent of all commitments. By 2024, this figure rose to 42 countries and territories (figure 5.7).<sup>33</sup>

**Figure 5.7 • Top recipients of international public financial flows to renewables, by type of energy, 2010-24**



Source: IRENA and OECD 2025.

In 2024, the number of countries and territories receiving 80 percent of flows rose to 33, up from 28 in 2023, with five additional countries. This is the highest number of countries and territories receiving 80 percent of commitments in a single year. Collectively, these 33 countries represent two-thirds of the population among the countries analyzed for SDG 7.a.1.

The top five country recipients of international public financial flows in 2024 were **India** (almost USD 1.67 billion), **Türkiye** (USD 1.36 billion), **Argentina** (USD 1.17 billion), **Ecuador** (USD 1.16 billion), and **Pakistan** (USD 1.12 billion). As in 2023, India and Türkiye remain the top two recipients in 2024. Uzbekistan and South Africa—the third- and fourth-largest recipients in 2023—dropped to 13th and 18th places, respectively, in 2024. Nigeria, which had moved up to fifth place in 2023, was not even in the top 50 in 2024. Such fluctuations are common, reflecting the variable financial flows.

<sup>33</sup> Countries and territories drop in and out of the top 80 percent because of the high annual variance in flows.

**India's** international financial flows declined by nearly 49 percent, from USD 3.3 billion in 2023 to USD 1.67 billion in 2024, yet the country remained the largest recipient. In 2024, India received these funds across 49 projects, mainly allocated to solar energy (29 percent) and multiple/other renewable energy technologies (65 percent). The share of multiple or other renewables increased 2.5 times compared to 2023's 13 percent. The Asian Development Bank was the largest contributor (USD 683 million) in 2024, followed by Germany (USD 476 million). In a notable shift and reversal of the previous year's trend, standard loans fell to 51 percent (USD 0.9 billion) from the peak of 85 percent achieved in 2023 (USD 2.8 billion), offset by concessional loans at 30 percent (USD 506 million). One of the major projects includes USD 236 million from the Asian Development Bank to enhance West Bengal's distribution system. Japan's commitments to India's clean energy sector rose sharply in 2024, with six commitments totaling around USD 216 million. The largest individual project appears to be a loan from the Japan Bank for International Cooperation to NHPC Limited of India.

**Türkiye** received USD 1.36 billion in 2024 across 19 projects. In 2024, flows were mainly debt-driven, and standard loans accounting for 97 percent and concessional loans for 2 percent of total financing. Only the European Union and Japan provided a standard grant of USD 3 million. As in 2023, the World Bank held the largest share of investments (USD 650 million). Around 60 percent (USD 0.8 billion) went to solar energy –the highest share provided by the World Bank as standard loans for two projects, each worth USD 254 million, for solar energy for isolated grids and standalone systems. Wind energy accounted for 12 percent of total flows, highlighted by a single project supported through a USD 107 million standard loan from the US International Development Finance Corporation to a locally operating independent power producer. Another 15 percent went to multiple/other renewable energy projects, the largest being a USD 66 million EBRD loan to support the development of the country's first hybrid solar-wind plant combined with 10 MWh battery storage technology.

**Argentina** received USD 1.17 billion in 2024 across six renewable energy projects; the Inter-American Development Bank gave USD 685 million toward the transition to a sustainable electricity sector. The International Bank for Reconstruction and Development contributed USD 489 million to support this transition. A leap from 18th place in 2023 to 3rd in 2024 highlights Argentina's remarkable progress in sustainable energy access and financing. As demand is expected to grow 6 or 7 percent through 2030 and most of the grid infrastructure is 30 to 50 years old, this project is anticipated to help integrate renewable energy into the generation mix.

**Ecuador** received USD 1.16 billion in 2024, a ninefold increase in flows from 2023 (USD 0.1 billion), across 16 projects. This spike was driven primarily by a single project rather than a sustained shift in financing patterns. The project was financed by the Inter-American Development Bank with USD 933 million, including a USD 489 million standard loan to support the energy transition and promote investment in Ecuador's energy sector. The second-largest contributor was the Republic of Korea, with a USD 100 million concessional loan for multiple/other renewable energy investments. Overall, multiple/other renewable energy projects accounted for 96 percent (USD 1.1 billion) of the flows, while geothermal energy accounted for the remaining 4 percent. Standard loans made up 82 percent (USD 1 billion) of the funding, followed by 17.5 percent (USD 0.2 billion) in concessional loans.

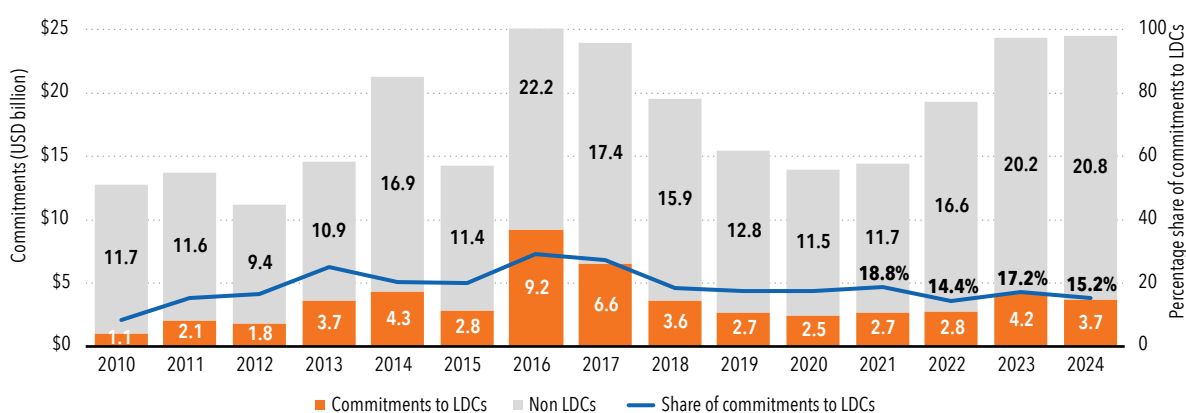
**Pakistan** received USD 1.12 billion for 32 projects in 2024, with 83 percent (USD 0.9 billion) of the funds allocated to hydropower and the remaining 17 percent (USD 0.2 billion) toward other renewable energy projects. Concessional loans accounted for USD 0.7 billion (66 percent), the largest since 2000, followed by standard loans making up 34 percent (USD 0.4 billion). The most significant commitments included a USD 242 million concessional loan from Saudi Arabia for Pakistan's 48-megawatt Shounter hydropower project and a USD 209 million concessional loan alongside USD 175 million standard loan from the International Development Association, as well as a USD 96 million standard loan from the World Bank for additional financing of the Dasu hydropower project. Pakistan's rise from 11th place in 2023 to 5th in 2024 reflects a substantial increase in international public financial flows, indicating stronger global support for the country's clean energy transition.

## Support to least-developed countries, landlocked developing countries, and small island developing states

Analysis of the flow of international public finance to support renewable energy in the 44 LDCs, 32 LLDCs, and 40 SIDS yields insights into flows to the countries with high energy access deficits and often limited fiscal and monetary capacity, which, without much international support, attract little financing.<sup>34</sup>

Flows to LDCs fell by 11 percent from 2023, accounting for only around 15 percent of total flows in 2024 at USD 3.7 billion. Forty-three LDCs received flows during 2024, leaving only Eritrea without any inflows for the year. Ten countries received 80 percent of inflows to LDCs, with Angola (USD 787 million), Ethiopia (USD 491 million), Malawi (USD 245 million), and Nepal (USD 421 million) at the top of the list. The Democratic Republic of Congo (USD 874 million), the top recipient of 2023, dropped to number 32 in 2024.

**Figure 5.8 • International public financial flows for renewables in least-developed and non-least-developed countries, 2010-24**



Source: IRENA and OECD 2025.

LDCs = least-developed countries.

Financing costs in LDCs remain high, with debt servicing burdens well above pre-pandemic levels and disproportionately higher than those of other developing country groups (UNCTAD 2025). In such contexts, international public finance may need to bear a higher proportion of risks to unlock the required investment. The international community will have to provide more grants, concessional debt, risk-mitigation support, and, crucially, risk-tolerant equity or similar instruments capable of mobilizing private investment. In 2024, more than one-third (36.8 percent) of LDC's flows were in the form of standard loans, 33 percent in grants, 29 percent as concessional loans, while bonds comprised just 1 percent.

Flows to LLDCs rose nearly 16 percent to reach USD 4.6 billion in 2024. As in 2022 and 2023, Uzbekistan received the highest commitment among LLDCs, receiving 11 percent of total flows (USD 529 million), followed by Kazakhstan (USD 526 million) and Tajikistan (USD 525 million).

Flows to small island developing states (SIDS) fell 5 percent to USD 585 million in 2024. Despite this decrease in absolute terms, the number of funded projects rose from 92 in 2023 to 133 in 2024, indicating a wider geographic spread of smaller-scale investments across the region. For example, approximately 33 projects were reported in the 2024 commitment bracket of USD 1 million to USD 100 million, compared with 26 projects in 2023, despite dropping 6 percent in cumulative financing for the same group. Papua New Guinea received the largest single share, attracting USD 212 million, which is 36 percent of the total SIDS flows.

<sup>34</sup> The United Nations' M49 regional classification includes 53 SIDS; this report excludes 13 of them from the SDG 7.a.1 classification, as explained in the methodology section at the end of the chapter. The country categories are regularly updated in line with the United Nations' latest M49 classification. Some countries appear in more than one category.

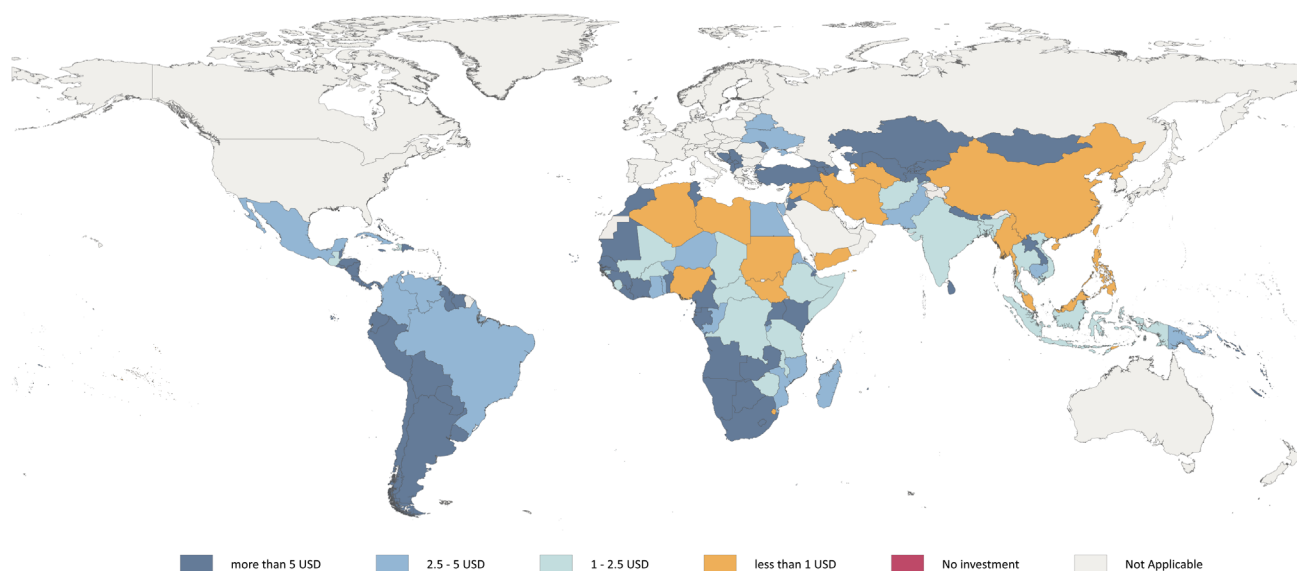
Although SIDS have historically received the least investment in absolute terms, on a per capita basis, SIDS are among the highest recipients, with Niue receiving USD 4,872 per person in 2024. Montserrat, Niue, and Tuvalu have attracted the largest investments since 2010, with a cumulative average of more than USD 300 per person. At the other end of the spectrum, Timor-Leste and Seychelles received less than USD 1 per capita. The highly uneven distribution of funds even within this already underserved group is particularly concerning as SIDS are among the most climate-vulnerable economies worldwide and receive only a pittance of the private mobilization finance flowing to other developing countries (IRENA and CPI 2025).<sup>35</sup> This leaves them both structurally dependent on public financial flows while lacking private capital to bridge the gap.

## Distribution of financial flows among countries

In 2024, the number of countries receiving no commitments fell from 27 to 24 (figure 5.8). Most countries and territories (65) received more than USD 5 per capita in 2024 (compared with 53 countries in 2023). Half the LLDCs are in this bracket, including Bhutan (USD 300), Republic of Moldova (USD 56), and Tajikistan (USD 50). In addition, only 39 percent of LDCs and 45 percent of SIDS are among the countries in this category.

Meanwhile, only 29 countries (19 percent of total developing countries) had per capita incomes between USD 1 and USD 5. Finally, a few countries received less than one US cent per person: Afghanistan, Cameroon, Democratic Republic of Congo, Myanmar, Niger, South Sudan, Sudan, and the Syrian Arab Republic, which received the least flows, at less than a tenth of a cent per person. Notably, all these countries appear on the World Bank list of fragile and conflict-affected states,<sup>36</sup> reflecting the broader difficulties that fragile and conflict-affected settings face in accessing and channeling international climate finance (UNDP 2021).

**Figure 5.9 • Average per capita international public financial flows for renewables, by country, 2010-24**



Source: IRENA and OECD 2025.

*Disclaimer:* This map was produced by the World Bank's Geospatial Operations Support Team, in the Cartography Unit. The boundaries, colors, denominations, and other information shown do not imply any judgment on the part of the custodian agencies concerning the legal status of or sovereignty over any territory or the endorsement or acceptance of such boundaries.

35 Private finance mobilization involves using public, concessional capital (grants and loans) from development banks to attract private investment for sustainable development in emerging markets (OECD 2025).

36 Based on the World Bank's classification of fragile and conflict-affected (World Bank 2025).

Including all regions and categories within the scope of the indicator, the leading recipients worldwide of flows per capita in 2024 were Marshall Islands (USD 2,079), Niue (USD 4,972), and Tokelau (USD 965), indicating that countries with small populations received more international public financial flows on a per capita basis, despite not receiving vast absolute amounts of commitments. Marshall Islands averaged USD 194 per capita from 2010 to 2024; Montserrat, USD 307 per capita; Niue USD 679 per capita; and Tokelau, USD 435 per capita. High per-capita values do not automatically imply that these countries are better off than more populous nations. Smaller economies frequently incur higher costs when implementing renewable technologies at a similar relative scale, along with added operational and logistical complexities.

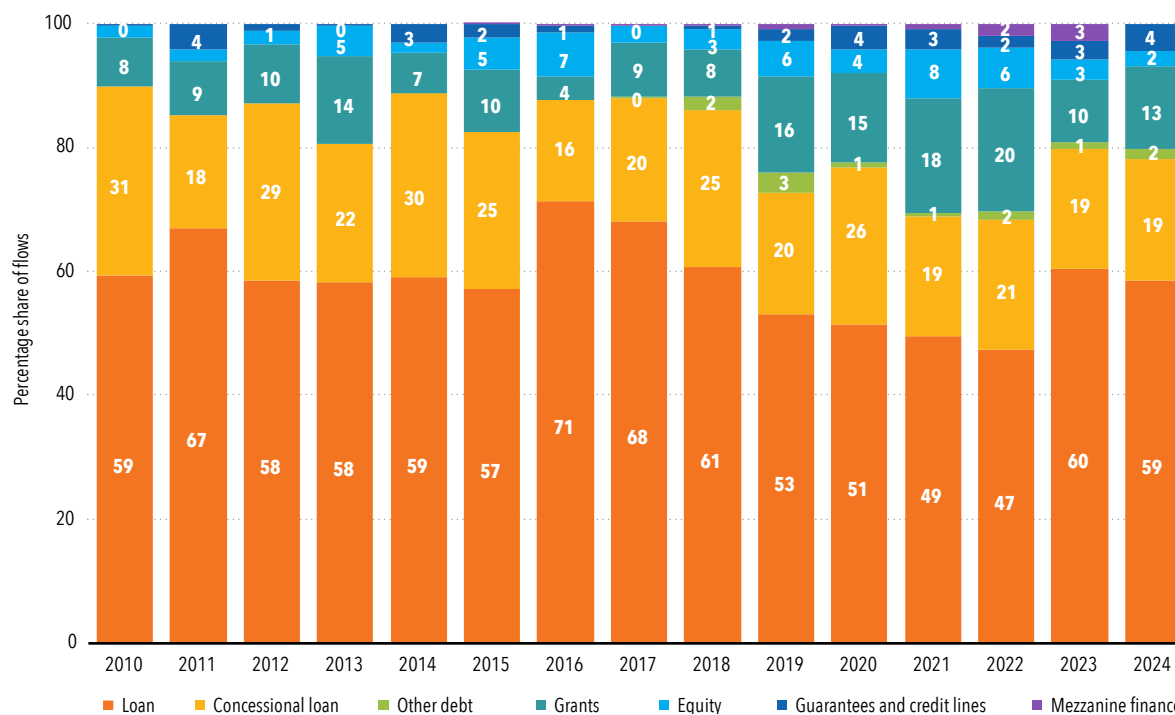
## Investments by financing instruments

Since 2010, most international public financial flows for clean energy have been largely debt-based (standard loans followed by concessional loans). Grants come next, followed by equity financing. Risk-mitigation support, such as guarantees and insurance products, varies from year to year but accounts for a small share overall.

The dominance of debt-based instruments in international public clean energy financial flows is consistent with global energy transition finance trends. Debt financing accounted for nearly half of total global energy transition investment in 2024, with grants representing less than 1 percent of total flows. The high reliance on debt increases financial vulnerability, particularly for developing economies, and targeted concessional finance and grant-based support must expand to ease capital costs and unlock larger project pipelines (OECD 2026).

Following a similar pattern in 2024, the mix remained heavily debt-driven but shifted slightly: debt fell to 80 percent of flows, including 59 percent of standard loans and 19 percent of concessional loans. Grants rose to approximately 13 percent of total flows, compared with 10 percent in 2023. Equity declined to around 2 percent of total flows, while the share of flows funded by guarantees, credit lines, and mezzanine finance together accounted for 5 percent of total financial flows.

Figure 5.10 • International public financial flows for renewables, by instrument, 2010-24



Among debt-based instruments, **standard loans** remained the backbone of international public financial flows yet declined from USD 14.7 billion in 2023 to around USD 14.4 billion in 2024, accounting for almost two-thirds of international public financial flows toward renewables. The largest international public financial flow was a USD 778 million standard loan from the Export-Import Bank of China to Angola for the development of an electricity transmission project.

Similarly, **concessional loans** climbed to USD 4.8 billion in 2024, from USD 4.7 billion in 2023. While Germany had overtaken IDA, committing USD 1.3 billion (compared to IDA's USD 1.2 billion) toward a USD 464 million concessional loan in India. Other debt-based instruments included asset-backed securities, green bonds, sustainability-linked bonds, and other debt securities (see methodology section for more details), which accounted for less than 2 percent of overall financing.

**Grants** accounted for 13 percent of total flows, an increase from the 10 percent reported in 2023. Total volume of flows financed by grants also rose 37 percent to USD 3.3 billion—up from previous year's USD 2.4 billion supporting multiple/other renewables projects. Overall, the largest beneficiaries of grants were Ukraine, where energy infrastructure has suffered extensive damage from the war (Human Rights Monitoring Mission in Ukraine 2024), and Sub-Saharan African countries—primarily Burundi, Ethiopia, Malawi, Mozambique, and Zambia—with electrification rates of 11.6 to 55.4 percent in 2023 (World Bank Group 2023). In 2024, almost half the commitments to Oceania were grants (USD 228 million of total USD 427 million). The International Development Association provided the most flows in the form of grants, equivalent to USD 911 million across 12 countries and territories in 2024.

**Equity** financing, by contrast, remained marginal, declining to USD 571 million and representing roughly 2 percent of total flows, consistent with a broader pattern where international public finance institutions analyzed in this report are predominantly incentivized to lend rather than take equity positions, partly due to credit rating considerations (Butler 2024).

Since 2000, only 31 out of 80 donors recorded in the database have made an equity contribution. In 2024, this number was limited to just 11 out of 80 donors, with the largest being the International Finance Corporation, the Asian Development Bank, the Asian Infrastructure Investment Bank, and the European Bank for Reconstruction and Development. For instance, the International Finance Corporation acquired a USD 122 million equity stake in India to finance a 602 MWp portfolio for a distributed generation assets project. The next-largest equity provider in 2024 was the Asian Development Bank, which also committed to a project in India related to commercial and industrial decarbonization and another project linked to Actis Asia Climate Transition fund,<sup>37</sup> also funded by (ADB 2024; AIIB 2024). This indicates these institutions' growing role in higher-risk, early-stage project development compared to more traditional loan operations. That said, a lack of equity financing in renewable energy projects has prevented projects from reaching financial closure (Audu and Duclos 2024).

**Guarantees and credit lines** nearly doubled to USD 1.1 billion in 2024—their highest-ever—accounting for 4.5 percent of the overall flows. Such commitments were made in at least six countries, compared to ten in 2023. The largest was a USD 512 million credit line to Banco do Brasil, aimed at financing renewable energy projects in Brazil.

These trends point to a deeper structural problem: International public finance remains largely risk-averse and is deployed primarily as senior secured debt. Closing investment gaps will require public institutions to take on greater risk through equity, guarantees, blended finance, and other risk-mitigation instruments designed to mobilize private capital at scale (IRENA and CPI, 2025).

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37 The Actis Asia Climate Transition Fund invests in companies across Asia and the Pacific—including China, India, Indonesia, Malaysia, Philippines, Thailand, and Viet Nam—to promote decarbonization and climate change mitigation (ADB 2024)

# Policy insights

Although international public financial flows to clean energy have continued to register modest growth according to the latest data, progress toward the various SDG 7 targets remains slow, particularly in countries with constrained fiscal space and limited access to affordable capital. While the economic repercussions from the 2026 energy crisis caused by the conflict in the Middle East are still unfolding, countries with limited strategic reserves and constrained market access are expected to bear a disproportionate burden from external shocks to financial stability (IMF 2026). The expected tightening of financial conditions is likely to elevate borrowing costs for many developing economies, thereby exacerbating fiscal challenges and further constraining their capacity to finance the energy transition effectively.

Previous editions of the report have assessed strategic priorities for international public finance in advancing SDG 7. These include reforming multilateral and bilateral lending architectures, strengthening national policy and regulatory frameworks to enable private capital mobilization, and deploying more targeted, impact-oriented public finance to address the electricity access deficit (IEA and others 2022, 2023, 2024). The analysis has further examined differentiated financing strategies across country contexts and the role of country platforms in coordinating stakeholders and scaling investment flows (IEA and others 2025).

The priorities outlined in previous editions remain critical in efforts to achieve SDG 7 given the 2026 energy and economic crises, particularly as development assistance contracts. Considering the slow gains on access to clean cooking,<sup>38</sup> this year's policy analysis focuses on the evolving landscape of clean cooking finance. This analysis adds insights and data on experiences to date, new financing instruments, responsibilities, and opportunities for scaling investments as well as tracking investments in clean cooking.

## ***Regional and geographical disparities and inadequate progress to date underscore the need for investments, available resources, and advances to close the clean cooking gap as significant investment shortfalls remain.***

Regional disparities in access to clean cooking reflect disparities in investment and funding levels. Countries showing a great deal of progress have typically seen sustained public investment, particularly in infrastructure and subsidies. For example, China, India, and Indonesia have as of 2024 achieved population access rates of 90.1, 80.6, and 89.9 percent, respectively (WHO 2026). In India, the large-scale liquefied petroleum gas (LPG) subsidy program for the rural poor, called Pradhan Mantri Ujjwala Yojana (now in its tenth year), has shifted 80 million households over to clean cooking (WHO 2021). Indonesia has closed its access gap, having invested up to USD 4.9 billion in 2019 on its LPG program (Hakam and others 2022). In China, rising incomes powered the country's clean cooking transition over the past 20 years, bringing it to 90 percent access (Shen and others 2022). But low-income households in rural China still rely on traditional fuels, proving that rising incomes alone cannot close the access gap. In recent years, an expanding portfolio of technological pathways is closing the deficit, offering advances in electric cooking technologies, renewable energy integration, decentralized energy systems as well as modern bioenergy in solid (for example, pellets), liquid (ethanol), and gaseous (biogas) forms.

The situation in Africa remains particularly challenging. It is the only continent where instead of progress in access to clean cooking, there has been a downward trend since 2015. IRENA's analysis shows that progress in clean cooking is driven by investments, and investments on the continent remain limited (IRENA 2026b). When investments in electricity infrastructure are excluded, government domestic spending on clean cooking by the top-100 access-deficit countries was less than half a billion dollars (USD 385 million). This occurred over a two-year period (2022-24), according to

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38 For more on the status of access to clean cooking, see chapter 2.

reporting from the countries (IRENA 2026b), and falls well short of the annual investments of USD 8 billion needed to attain universal access by 2030 (IEA 2024). Despite securing a USD 2.2 billion commitment toward clean cooking in its inaugural Clean Cooking Summit for Africa in 2024, only USD 470 million has been disbursed (IEA 2025). This gap highlights a persistent shortfall not only in the volume of finance but also in its delivery. These disparities underscore the role played by sustained investments that are impact driven and scaled up.

## ***Concentration of investments on a few technologies and companies***

Despite the increasing number of viable clean cooking technology options, LPG continues to lead clean cooking investments from both public and private sectors in access-deficit countries. Of the USD 385 million reported through IRENA's government surveys, LPG attracted 65 percent of the investments between 2022 and 2024 (IRENA 2026b), a finding in line with SEforALL (2024) and CCA (2023). The IEA estimates that direct investment in Sub-Saharan Africa, investments in e-cooking and bioethanol, biogas, and other cooking solutions have plunged from USD 192 million in 2020 to USD 83 million in 2023 (IEA 2025). Renewables-based cooking solutions are meanwhile expected to play a significant role in the short and medium term and become more dominant over the long term (IEA 2023). The contours of the clean cooking transition will be determined by investments made today.

Analyses and scenarios on how to close the clean cooking deficit highlight the need for a multi-fuel and multi-technology strategy for achieving universal access. Concentrating investments in a few technologies and companies—with, for example, eight companies receiving 90 percent of capital in 2025 (CCA 2025)—risks unfair competition among the various technologies and undermining the entire transition goal. The 2026 energy crisis has also underscored the vulnerabilities associated with heavy reliance on imported LPG for clean cooking applications. Supply chain disruptions and price volatility could render LPG-based cooking solutions economically infeasible for households. An equitable allocation of investments would allow consumers to choose among cooking technologies that are sustainable, affordable, safe, and aligned with public health objectives while being culturally and contextually appropriate.

## ***Limited range of financing sources and instruments and the need for diversification***

Public sector finance is the most dominant and critical source of funds for the clean cooking sector. It can achieve the required scale of transition. But private sector finance plays a complementary role that at times serves as the sector's only form of finance.

Yet private sector finance is clustered around instruments that are not especially responsive to the sector's needs, which include those enabled by public finance, for example, and results-based financing through government and donor programs.

Now in its fifth year, the Clean Cooking Alliance (CCA) tracks clean cooking investments by instruments as part of its Industry Snapshot reports. The latest report (CCA 2025) indicates that debt financing soared to 84 percent in 2025, up from 17 percent in 2024. Debt financing is the main source of capital for clean cooking enterprises. Driven by this surge in debt financing, companies that report their data showed a fivefold increase over capital raised the previous year.

While debt is helping to boost the finance required for the sector, it mainly helps LPG-based businesses. Reports show that 59 percent of the total funding tracked went into LPG enterprises, with individual companies receiving up to USD 50 million debt in a single year (CCA 2023). Given the strong consensus surrounding the clean cooking transition, there should be a fair allocation of financing across different cooking solutions. As it becomes increasingly evident that debt favors businesses promoting LPG, other instruments that could attract businesses promoting a range of cooking solutions should be emphasized.

The data available show, however, a slump in alternative finance instruments. Equity investment, for instance, fell 46 percent from the previous year according to the Clean Cooking Alliance, while grant financing formed just 7 percent of total capital (CCA 2025). The decline in grants toward clean cooking aligns with the overall drop in ODA spending, down 23 percent according to the latest data (OECD 2026). Yet most clean cooking companies are just starting out (Coldrey and others 2023). They are also in need of equity and grants to facilitate their market entry so they can thrive. Such companies include 8 out of 12 Tanzanian companies captured in an in-depth analysis (IRENA 2026a). They said they could not access debt capital and were relying on grants to sustain their operations. At interest rates of up to 17 percent, and stringent collateral requirements, debt capital was out of reach.

Carbon finance has continued to dominate the sector. In 2023, over USD 218 million was invested in clean cooking companies globally, with 96 percent of these funds going to companies that develop or generate carbon credits (CCA 2025). But this level of investment still represents only 2.7 percent of the annual USD 8 billion funding gap. Carbon finance is still unable to unlock the different forms of capital needed, first, to fund the industry's growth path and, second, to build a sustainable and expanding clean cooking market. For example, local financial institutions, despite the potential they represent for capital, play a limited role in clean cooking markets. As a result, although the sector has welcomed carbon finance and attracted private sector investments, carbon finance could also pose risks if it becomes the only or predominant strategy rather than a complementary source of financing.

Overall, these trends highlight the need to diversify financing sources and instruments, as discussed below. Tilting the balance toward more risk-taking and catalytic instruments and structures such as grants, equity, equity-like instruments, risk-sharing, and risk-mitigation instruments such as blended finance can have several benefits. Emphasizing new instruments can also support the diversity and affordability of solutions offered to consumers, as well as their resilience, scalability, and inclusivity. Diversification should apply not only to financing instruments but also to the allocation of investment across clean cooking technologies, including context-specific solutions such as biogas, biomass fuels from residues, e-cooking, and other renewable energy-based cooking options.

## ***The role of international and domestic public finance and other funding sources***

Public finance can stimulate demand, tackle affordability constraints, develop supply chains and infrastructure, and incentivize the private sector reach to the last mile (IRENA 2024).

Domestic government spending on clean cooking remains limited in countries with high access deficits, despite the important role it plays in the sector. Many governments in countries that lack universal access see external finance as more important than domestic resource mobilization (IRENA 2026a). But domestic government spending remains vital. Priority should be placed on using domestic government to support last-mile coverage with strategies that side step unintended beneficiaries (for example, as part of social protection programs).

International public funds (especially grants and concessional loans) should be used to boost domestic public spending on clean cooking. Public finance spending is crucial for infrastructure, knowledge and awareness, and affordable stoves and fuels for low-income consumers.

Households themselves represent another source of funds to support clean cooking solutions. Their contribution could grow as traditional fuels become scarce or costly (ESMAP 2020) and as the cost of higher tier alternatives fall through economies of scale. Their potential cannot be realized, however, without targeted support. With no financial assistance, the costs of traditional fuels will deepen energy poverty rather than accelerate adoption. This barrier can be surmounted only through innovation and financial intervention. Scalable business models and financial support (for example, funding for cookstove companies to operate a consumer credit line) alongside broader consumer finance would ease access to those struggling to pay the high upfront costs. On-bill financing of electric cooking appliances is being implemented in Tanzania (MECS 2025).

While private sector investments, including those incentivized by carbon finance, represent a major contribution, government spending is what drives the clean cooking transition, as shown by country examples where success is reported. To take one example, success in mobilizing private sector investments has been seen in countries that have provided incentives such as removal of import taxes on stoves and components, their production, storage and distribution equipment, and value-added taxes. But such fiscal measures need to be uniformly applied and sustained, as uncertain policy landscapes deter investment. Building a strong pipeline of bankable clean cooking projects can also attract investments into countries, since clean cooking faces a two-prong financing challenge: limited supply of finance and low uptake of funds available for the sector, as in the case of Tanzania (IRENA 2026). Government funds can be used to provide this support, together with grants and concessional finance from donors.

Ultimately, closing the clean cooking gap will require a coordinated approach that combines increased public finance, stronger domestic investment, and targeted financial solutions to unlock household demand.

## ***Strengthening data to track progress and challenges in clean cooking investments***

The persistent lack of comprehensive data, combined with the complexities of defining investment boundaries, continues to hinder a clear understanding of progress in clean cooking. The ecosystem of investments in clean-cooking spans diverse upstream infrastructure projects (for example, electricity infrastructure enables e-cooking). Off-grid solar is one example, along with its enabling components, including data and software systems that support carbon finance investments (IRENA 2026).

To identify investment gaps and priorities for clean cooking, a robust and continuous data collection needs to track clean cooking investments. But clean cooking finance does not fall within the scope of SDG 7.a.1 tracking. In addition, efforts to track its financial flows are both sporadic and unharmonized, and various organizations that track flows have their own methodologies. IRENA's analysis identified a major gap in clean cooking finance in government spending in the Global South. IRENA's tracking filled the gap for the period 2022-24 (IRENA 2026b), but for such information to be useful, tracking must be continual, conducted on annual basis, and expanded to cover all funding sources.

## ***Establishing clean cooking strategies linked to investment plans***

To mobilize finance for clean cooking, investment strategies and plans are a prerequisite. Although more countries have designed clean cooking strategies, few have adopted investment plans linked to those strategies, making them hard to implement and assess. Depending on the country context, technical assistance might benefit countries as they develop such plans. For instance, IRENA is supporting the government of Uganda on an investment prospectus showcasing clean cooking opportunities in the country. What type of investments would help Uganda to proceed? What investments would raise their visibility to domestic and international investors? The investment prospectus also helps to coordinate donors and other financing entering the country. A prospectus helps to avoid market distortions whereby one donor is financing subsidization of technology while another is focused on market-based approaches.

The investment plans should be linked to financing needs across the entire ecosystem of clean cooking, including technologies, fuels, and the enabling conditions for their adoption (such as planning, modeling, regulation, standards, and capacity building). Some investment may occur outside the clean cooking and energy sector (for instance, investment in information technology systems that enable pay-as-you-go monitoring software). As such, they would generate results for sectors like health, agriculture, and environment. So monitoring frameworks should be developed alongside impact indicators (for example, adoption and sustained use, exposure- and health-related outcomes, catalyzed innovations, and mobilized private sector capital). Such efforts can expand the support base for clean cooking, including tapping into investment opportunities outside the energy sector where the impact of clean cooking extends, like environment, climate, health, education, and agriculture.