

OECD Blended Finance Guidance for Clean Energy

HIGHLIGHTS



CONTEXT

Meeting the Paris goals of limiting global warming to 1.5°C by the end of the century will require an unprecedented mobilisation of finance. The financing needs to meet these goals are particularly acute in emerging and developing economies.

All sources of finance – public, private, domestic, and international – need to be mobilised at scale. In particular, the huge stocks of global commercial capital need to be mobilised towards more productive uses.

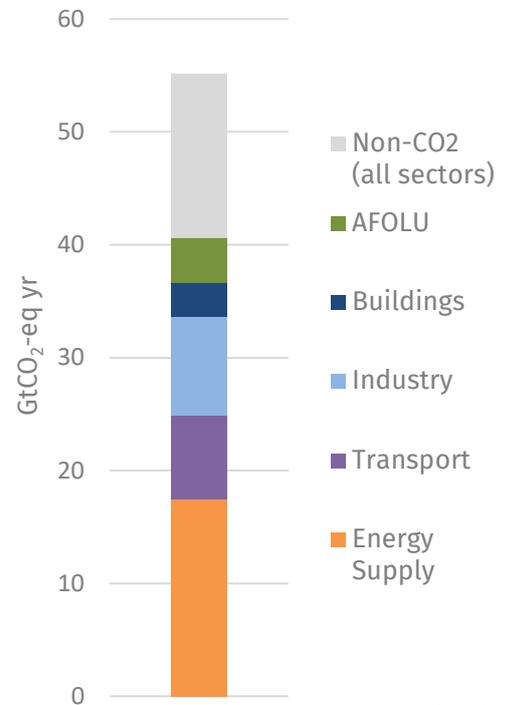
Global finance is increasingly in search of investments to support the transition, as well as the enabling measures required to make them viable, and policy certainty by governments on the shape of the transition.

While finance will need to be mobilised at scale to support climate mitigation and adaptation in all sectors, the energy sector, which accounts for around three-quarters of global greenhouse gas emissions, will require the lion's share of investment.

USD 150 billion
annual clean energy
investment in emerging and
developing economies in 2020

USD 1 trillion
annual clean energy
investment needs in
emerging and developing
economies by 2030

Sectoral GHG emissions (2019)

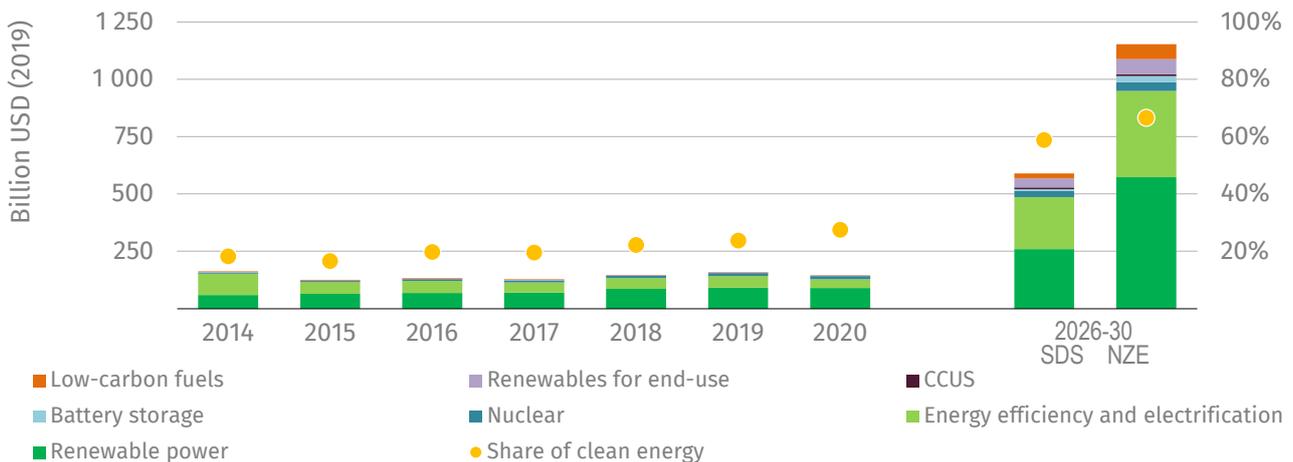


Source: IPCC (2022).

"There is an urgent need to deploy private capital in emerging markets and developing countries to enable them to realise the commitments made in the Paris Agreement. The current scale of public and private capital flows is modest in relation to the trillions of dollars in sustainable investment needed for these nations to meet the challenges ahead."

Glasgow Financial Alliance for Net Zero

Emerging and Developing Economy (EDE) clean energy financing needs
Clean energy investment in EDEs compared with projections in the IEA Sustainable Development Scenario (SDS) and Net Zero Emissions by 2050 Scenario (NZE)



Source: International Energy Agency (2021), Financing Clean Energy Transitions in Emerging and Developing Economies 2021.



BLENDED FINANCE PRINCIPLES

Blended finance is the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries.

The scale of the clean energy investment challenge requires blended finance to be rapidly scaled towards the objective of mobilising commercial finance, in line with Principle 2.

Sub-principle 2.A: Ensure additionality for crowding in commercial finance

Sub-principle 2.B: Seek leverage based on context and conditions

Sub-principle 2.C: Deploy blended finance to address market failures, while minimising the use of concessionality

Sub-principle 2.D: Focus on commercial sustainability

The OECD DAC Blended Finance Principles

The OECD's Blended Finance Principles offer a common policy framework to guide the use of blended finance.

As well as increasing the mobilisation of commercial finance in line with OECD Blended Finance Principle 2, blended finance should be deployed in line with wider principles:

PRINCIPLE 1: ANCHOR BLENDED FINANCE USE TO A DEVELOPMENT RATIONALE

PRINCIPLE 2: DESIGN BLENDED FINANCE TO INCREASE THE MOBILISATION OF COMMERCIAL FINANCE

PRINCIPLE 3: TAILOR BLENDED FINANCE TO LOCAL CONTEXT

PRINCIPLE 4: FOCUS ON EFFECTIVE PARTNERING FOR BLENDED FINANCE

PRINCIPLE 5: MONITOR BLENDED FINANCE FOR TRANSPARENCY AND RESULTS

Source: OECD (2020), www.oecd.org/dac/financing-sustainable-development/blended-finance-principles/guidance-and-principles/



POLICY LESSONS

Blended finance interventions need to be tailored to project, sector and country specific risks, and need to be deployed as part of a wider suite of enabling measures

The nature of risks, market failures, and wider barriers to investment will vary markedly across projects and different country contexts. The features that give rise to the requirement for blended finance will often reflect local circumstances, rather than the technology in question. Blended finance interventions therefore need to be designed on a case-by-case basis, reflecting these risks, and not presuppose the suitability of particular instruments. The deployment of blended finance needs to be accompanied by wider measures addressing the underlying market failures that deter commercial investment.

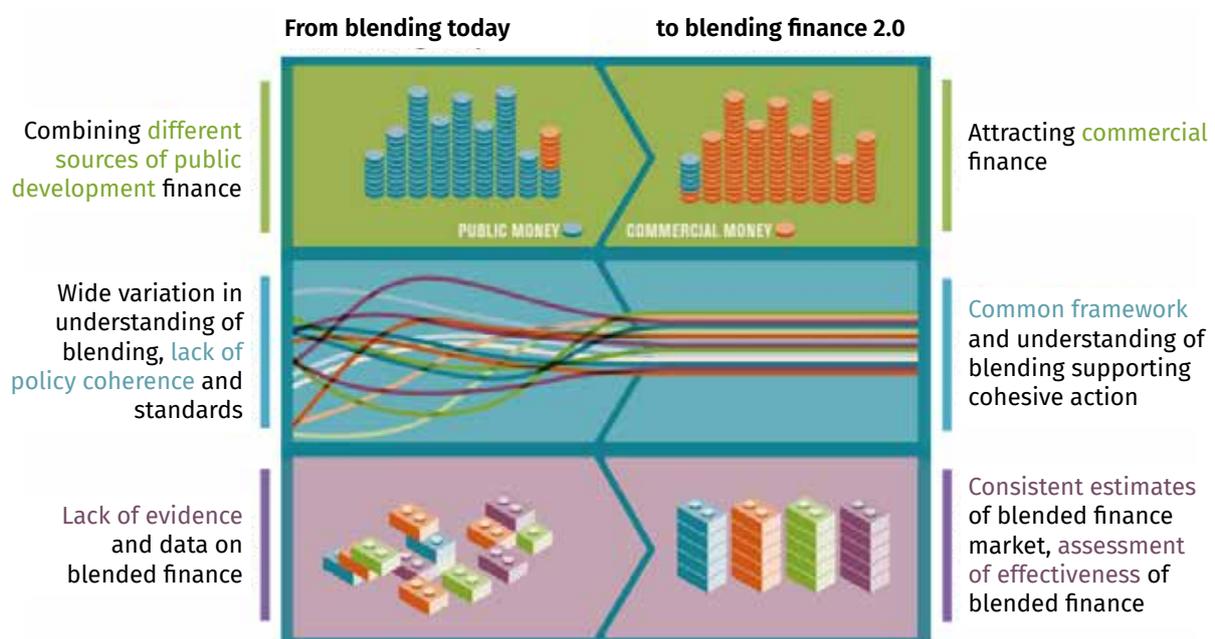
The rapidly changing economics of the clean energy sector requires development actors to take a dynamic approach to their interventions

Many clean energy investments already provide strong value propositions for investors and compete on cost and returns with incumbent technologies. The growth of the sector also means risks and other barriers to investment are better understood and navigated. However, the huge investment potential in clean energy is a global phenomenon, with plentiful opportunities for institutional investors in advanced economies as well as in emerging and developing economies. The challenge for development finance in general, and blended finance in particular, will therefore be to ensure that it provides enough incentive to commercial finance to invest in frontier markets.

The nature, composition, and distribution of development finance needs to shift rapidly and at scale towards private capital mobilisation

In order to mobilise commercial finance for climate action, including the energy transition, and towards the wider Sustainable Development Goals (SDGs), donors need to alter the political and financial incentives of multinational development banks (MDBs) and development finance institutions (DFIs) away from their traditional business models, and equip them with the governance systems to rise effectively to the global sustainable development challenge.

Moving towards Blended Finance 2.0

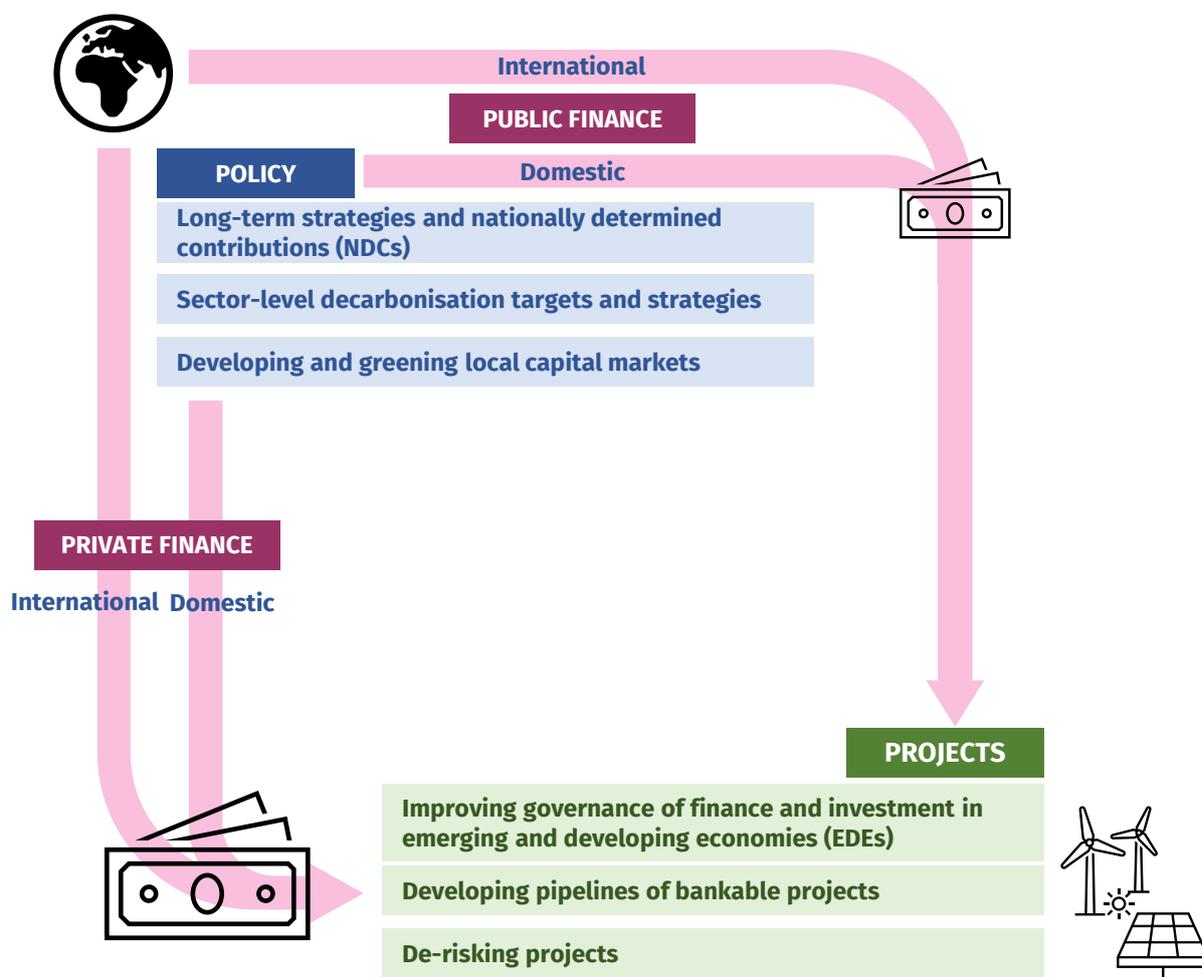


CO-ORDINATION AND GOVERNANCE

Strengthening co-ordination, governance, and institutional arrangements will be critical to optimising the deployment and maximising the effectiveness of blended finance

The clean energy transition will be complex and multifaceted, owing to the all-encompassing nature of energy infrastructure. Decisions on electricity generation, for example, will need to be intimately tied to wider plans for industrial development, transport and industrial decarbonisation, and investment in wider social and economic infrastructure. Sector-level strategies therefore need to be developed in a coherent way, working through tensions, and exploiting synergies across different sectors.

The clean energy policy and investment ecosystem



Elements of effective co-ordination and governance

- Sector strategies and project preparation to develop pipelines of bankable projects at scale.
- Sectoral financing strategies that link different sources of finance to specific needs.
- Co-operation with private sector to identify market failures, risks and barriers to investment.
- Robust governance to facilitate strong relationships between governments, donors and private sector.



OFF-GRID CLEAN ENERGY SYSTEMS

Step 1: Determine development objective

The overriding rationale for investment in off-grid systems is energy access: providing affordable, clean energy to underserved groups relatively quickly and cheaply, particularly in areas where grid extensions would be too costly or take too long to deploy.

Step 2: Identify financing gap

Distributed renewables and mini-grid solutions often face the problem of being too small to attract the attention of commercial investors. The relative cost of conducting due diligence on projects, relative to the expected returns, is much higher for investors.

Step 3: Identify barriers to investment

Scale and transaction costs

Small projects/developers with little track record struggle to attract investor interest.

Stability of revenues

Difficulty in assessing supply/demand. Projects do not benefit from structures that allow producers to sell excess capacity to grid.

Information asymmetries – project viability

Business models are relatively new and commercial viability of projects difficult to assess.

Information asymmetries – developer profiles

Investments often undertaken by consumers and SMEs, with little/no track records and no/poor credit ratings.

Step 4: Choose financial instruments while minimising concessionality

Aggregation and securitisation

Pooling of projects into larger, rateable assets through special purpose vehicles (SPVs), with shared legal services, technical advice, and common documentation.

Guarantees

Revenue and partial risk guarantees to protect investors against revenue shortfalls, or wider risks such as licensing and permitting delays.

Grants

Grants to support project development during early stages, including to support project preparation.

Step 5: Co-ordinate intervention with the ecosystem

The involvement of stakeholders on the ground, including local communities and consumers, is critical to maximising impact and identifying and exploiting synergies between energy access and wider development objectives, e.g. productive end-use.

Step 6a: Monitor and evaluate development impact

Energy access – health, education and social: MW of additional electricity capacity; number of new electricity connections to households; air quality and health indicators (including reduced illness and premature deaths from air pollution) indicators

Energy access: economic: jobs created (direct and indirect); new electricity connections to firms

Emissions reduction: tonnes of CO₂

Step 6b: Exit once commercial markets are functioning: indicators for commercial sustainability

Price competitiveness: ability to pay and cost versus incumbent technologies

Scale targets: number and profile of customers; electricity demand (MW/h)

Stability of revenues: data of revenue and profit fluctuations

ENERGY EFFICIENCY

Step 1: Determine development objective

Energy efficiency provides multiple development benefits beyond reduction in energy use and fuel cost savings. These include job creation, emissions reduction, improved safety for women and girls, and better indoor air quality and comfort supporting health and education outcomes.

Step 2: Identify financing gap

Commercial financing of energy efficiency faces several barriers: investments are often undertaken by individuals or small and medium-sized enterprises (SMEs); it does not yield direct revenue, but incremental savings over time; and there is a lack of financial instruments designed specifically to fund investments in efficiency.

Step 3: Identify barriers to investment

Public goods

Efficiency investments often undertaken by local/regional governments, with constrained access to finance due to low credit ratings.

Scale and transaction costs

Small projects with varying characteristics have relatively high transaction costs for investors.

Information asymmetries – confidence in savings

Inadequate data on performance in new markets; performance impacted by operational know-how and local factors.

Collateral requirements

SMEs and energy service companies (ESCOs) lack capital base necessary to access affordable debt finance.

Energy subsidies

Create market distortions, leading to wasteful consumption of fossil fuels and electricity, and reducing incentives for investment.

Step 4: Choose financial instruments while minimising concessionality

Energy savings insurance

Insurance to cover shortfall in projected savings versus actual project performance.

Asset-backed securities

Pooling of energy efficiency project loans to create asset-backed securities to free up capital for additional lending.

Equity capital funds for energy efficiency

Provide a share of capital or collateral requirement to access finance.

Partial risk guarantees or first loss facilities

Risk sharing mechanisms that provide partial coverage to partner financial institutions or take first loss in case of non-performance.

On-lending schemes and revolving funds

Dedicated credit lines for on-lending, potentially including concessional loans for low-income households and MSMEs.

Step 5: Co-ordinate intervention with the ecosystem

Co-ordination with local financial institutions and asset owners to build awareness on viability/merits of efficiency investments. Co-ordination with energy regulators responsible for setting energy efficiency standards.

Step 6b: Exit once commercial markets are functioning: indicators for commercial sustainability

Number of transactions, market penetration: # or %

Cost targets: \$

Project replication without support

Step 6a: Monitor and evaluate development impact

Energy savings per year: PJ or GWh

Cost savings: \$

Emissions reduction: t of CO₂

Employment: number of jobs created



UTILITY-SCALE RENEWABLES

Step 1: Determine development objective

Utility-scale renewable power generation is often central to a country's development strategy, helping achieve energy access, industrial and wider development. Higher shares of renewables generation will also be critical to decarbonisation efforts.

Step 2: Identify financing gap

Large renewable projects often face similar risks to other large infrastructure projects: long planning phases surrounded by political uncertainty; long construction phases, delaying the onset of revenues; and payment structures that are sensitive to macroeconomic and currency fluctuations.

Step 3: Identify barriers to investment

Long planning and construction phases

Long project development timelines expose investors to a high degree of uncertainty and delayed revenue generation.

Counterparty, off-taker, transmission delay

Weak credit-worthiness of local partners. Projects depend on construction on new grid infrastructure in time for generation.

Exchange rate volatility

Exchange rate volatility creates fluctuations between obligations and revenues priced in different currencies.

Revenue volatility

Shifts in demand or tariff changes resulting in volatile revenues for investors.

Financial stability

Single buyer model creates financial stability risks for banks exposed to single entities, who therefore limit exposure.

Step 4: Choose financial instruments while minimising concessionality

Direct investment

Equity investment to boost investor confidence and minimise due diligence requirements for commercial investors.

Political risk insurance

Insurance covering range of risks: political; currency; breach of contract; expropriation; non-honouring of financial obligations.

Currency risk hedging instruments

Subsidies to reduce cost of hedging instruments, including swaps to convert loan payments into local currency.

Guarantees and performance insurance

Guarantees covering against financial loss from multiple or specific risks (e.g. transmission line delay)

Grants

Grants to finance technical assistance or early project development costs, supporting the development of more bankable projects.

Step 5: Co-ordinate intervention with the ecosystem

Delivering large, complex projects requires the involvement of many actors (national/regional governments, regulators, transmission/distribution companies). Project viability is often dependent on supporting policies and infrastructure.

Step 6b: Exit once commercial markets are functioning: indicators for commercial sustainability

Stability of pricing and revenue: revenue data

Electricity generation stability: annual generation GWh

Price competitiveness: cost vs incumbent technology

Step 6a: Monitor and evaluate development impact

Health and social: air quality, health indicators, new connections to households;

Economic: Gigawatt (GW) of additional capacity; jobs created; new electricity connections to firms;

Emissions reduction: t of CO₂.



OTHER CLEAN ENERGY AND INTEGRATION

Step 1: Determine development objective

A number of other clean energy and integration technologies will need to be developed and commercialised to achieve a net-zero transition across the entire energy system. This includes large-scale energy storage to facilitate higher levels of variable renewable generation, green hydrogen and carbon capture, utilisation and storage (CCUS).

Step 2: Identify financing gap

Blended finance can be used to support the early market development of large-scale storage, CCUS and green hydrogen. It can be used to de-risk near commercial deployment at more mature stages of the value chain, rather than taking on technology risk.

Step 3: Identify barriers to investment

Externalities

Lack of adequate carbon pricing makes business case for CCUS unattractive. CCUS difficult to monetise.

Revenue uncertainty

Lack of compensation models for energy storage. Cross-value chain revenue risk for CCUS due to complexity of value chains.

Information asymmetries

Inadequate data on performance of new technologies.

High capital requirements

CCUS and green hydrogen projects are large and capital intensive, with high perceived risks.

Foreign exchange risk

Imported equipment in foreign currency requires hedging, which is expensive.

Step 4: Choose financial instruments while minimising concessionality

Revenue guarantees

Guarantees to support creation of clusters to facilitate use of captured CO₂ for CCUS.

Partial risk sharing or first loss facilities

Support establishment of market confidence and track record for newer technologies.

Viability gap funds

Support new technology projects to meet affordability and commercial return expectations.

Foreign exchange guarantees

Shift foreign exchange risks from smaller actors to larger dedicated facilities more capable of taking on and managing them.

Step 5: Co-ordinate intervention with the ecosystem

The development of blended finance interventions for newer technologies should integrate financing strategies as part of national roadmaps that are often developed at the country level to guide market development.

Step 6a: Monitor and evaluate development impact

Emission reduction: tonnes CO₂

Employment: jobs created

Renewable energy integration: MW/GWh

Additional hours of emissions-free electricity: hours

Retirement of diesel generators: MW

Step 6b: Exit once commercial markets are functioning: indicators for commercial sustainability

Number of transactions: #

Scale targets: MW/GWh or tonnes of CO₂

Cost parity with incumbent technology: %



CASE STUDIES

Energy Savings Program, Columbia – Inter-American Development Bank

The Energy Savings Insurance pilot program in Colombia was launched in 2016 under the leadership of Bancóldex, the Colombian national development bank, with financial and technical support from the Inter-American Development Bank and the Climate Investment Facility's Clean Technology Fund. The program offered a de-risking package consisting of both financial and non-financial elements designed to build investor confidence and drive investments in energy efficiency projects. The program was expected to support 104 firms to reduce about 13,977 tonnes of CO₂ emissions annually through energy efficiency upgrades. The ESI model combines medium- and long-term credit lines with three risk mitigation instruments that support the identification and structuring of technically robust and bankable projects: a standard contract, technical validation, and the energy savings insurance.

MOBILIST, ThomasLloyd Energy Impact Trust – UK

The Mobilising Institutional Capital Through Listed Product Structures (MOBILIST) programme – funded by the UK Foreign, Commonwealth & Development Office (FCDO) aims to catalyse the deep pools of institutional investment into developing economies. MOBILIST supports fund managers and similar intermediaries who seek to list products dedicated to assets in official development assistance (ODA) eligible countries in major and local stock exchanges.

Energy Efficiency and Conservation Financing Promotion Project, Bangladesh – JICA

The Japan International Cooperation Agency's (JICA) Energy Efficiency and Conservation Financing Promotion Project in Bangladesh is designed to promote energy savings for industry and other economic activity. The project provides incentives to private firms to install updated energy-efficient equipment to their production systems.

The project aims to nurture market development for energy-efficient equipment by providing access to public finance for industrial firms.

Pro Mini-Grids Programme, Uganda – GIZ

The Pro Mini-Grids programme supported the government of Uganda in securing private investments for solar mini-grids in 15 villages in the south of the country and 25 in the north of the country. The programme provided subsidies on capital expenditures for generation assets and support for project aggregation and contract preparation to simplify procedures and create a larger ticket size to attract investors.

Scatec, MIGA and EBRD Green Project Bond, Benban Solar Park, Egypt

Benban Solar Park in the Arab Republic of Egypt is one of the world's largest solar complexes, consisting of 32 solar plants, with a total generation capacity of 1465MW.

In April 2022, Scatec and its partners refinanced the non-recourse project debt for six solar power plants, with a total capacity of 380MW, that have been operational since 2019. The plants will provide an estimated annual electricity projection of 930GWh, enough to provide energy to more than 420,000 households, and avoiding 423,000 tons of CO₂ emissions per year. The project is underpinned by a 25-year power purchase agreement (PPA) with the Government of Egypt.

Regional Energy Efficiency Programme, European Bank for Reconstruction and Development

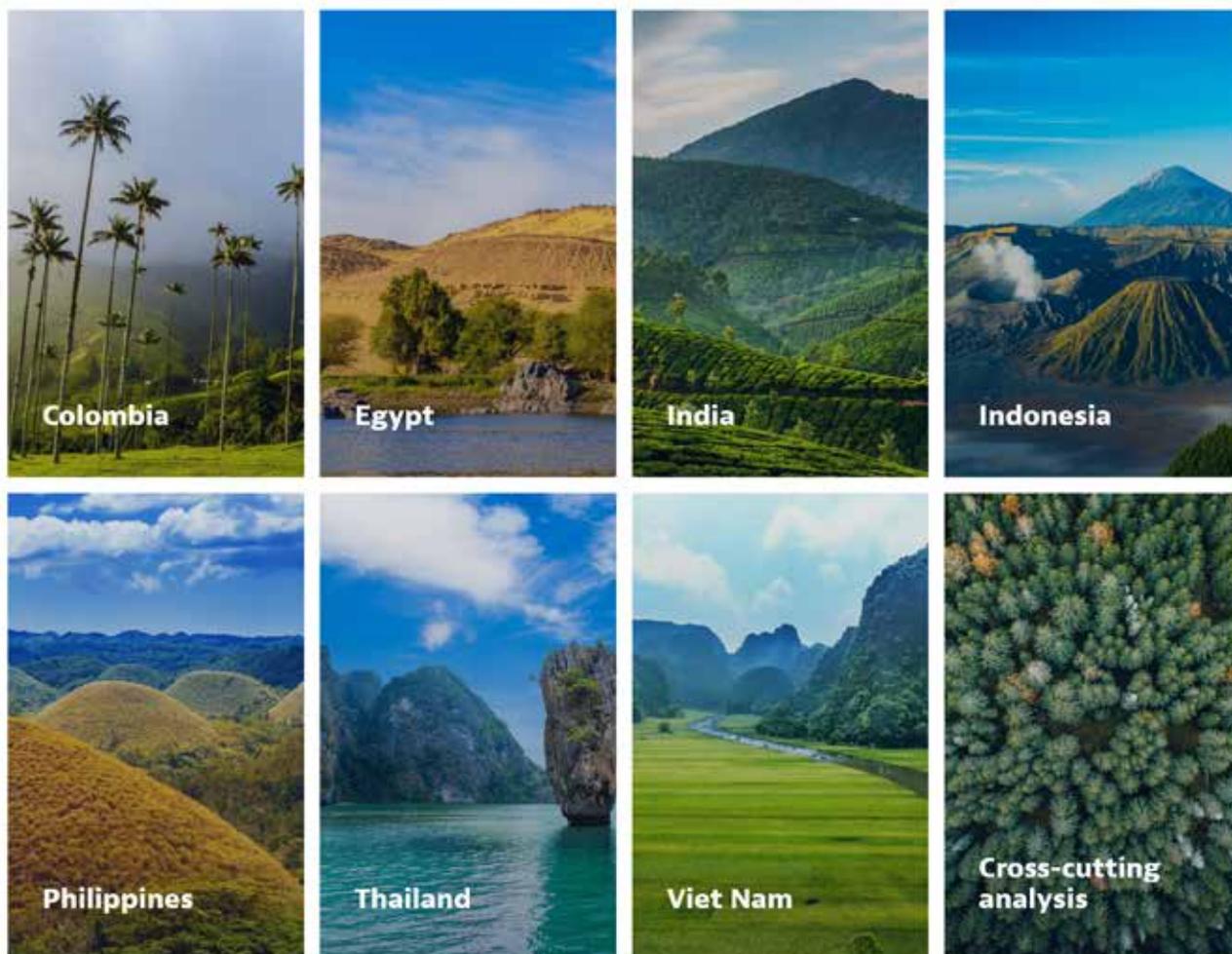
The Regional Energy Efficiency programme (REEP) was established in 2012 as a joint collaborative programme between IFIs (EBRD since 2012, KfW since 2017), the European Commission and bilateral donors under the Western Balkans Investment Framework (WBIF). The overarching development objective has been to promote a sustainable market for energy efficiency in the Western Balkans.

REEP's operational model successfully blends IFI financing with EU and bilateral donor grants to offer an integrated package of targeted policy dialogue, technical assistance, and financing facilities deployed both directly and through local partner banks. This integrated approach leverages reforms in the sector whilst providing targeted finance to stimulate sustainable growth.



DISCOVER THE CEFIM WEBPAGE

Visit www.oecd.org/cefim for on-going insights into CEFIM programme activities and events. This includes CEFIM country pages with interactive data and analysis on clean energy market trends, governance, finance and investments to provide investors, development partners, policy makers and related stakeholders with market intelligence on opportunities for clean energy investment in CEFIM partner countries.



Visit www.oecd.org/dac/financing-sustainable-development/blended-finance-principles/ for more insights and data from the OECD on blended finance, including the OECD DAC Blended Finance Principles.

Meeting the Paris Agreement goals will need a rapid acceleration of finance towards clean energy investments in emerging and developing economies. Blended finance is an important tool that can help mobilise commercial investment towards clean energy, whilst preserving scarce public resources for wider climate and development objectives. A systematic approach to the deployment of blended finance – that tailors instruments to the nature of underlying barriers to commercial investment, minimises concessionality, has a clear exit strategy, and is co-ordinated within a wider ecosystem of support and enabling measures – can help maximise its development impact and stimulate private sector development.

This Highlights document is based on the *OECD Environment Policy Paper “OECD Blended Finance Guidance for Clean Energy”*.

For more information:

OECD (2022), "OECD blended finance guidance for clean energy", *OECD Environment Policy Papers*, No. 31, OECD Publishing, Paris, <https://doi.org/10.1787/596e2436-en>.



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Mohammed.Saffar@oecd.org
Cecilia.Tam@oecd.org



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