

[Home](#) > [Environment](#) > [Climate change and energy](#)

Guidance

Ayrton Fund

The Ayrton Fund supports clean energy research, development and demonstration (RD&D) to accelerate the clean energy transition in developing countries.

From: [Department for Energy Security and Net Zero \(/government/organisations/department-for-energy-security-and-net-zero\)](#), [Department for Science, Innovation and Technology \(/government/organisations/department-for-science-innovation-and-technology\)](#) and [Foreign, Commonwealth & Development Office \(/government/organisations/foreign-commonwealth-development-office\)](#)

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Contents

- — [Overview](#)
- — [Ayrton platforms and programmes](#)
- — [Further information about the fund](#)

- — [Contact details](#)



Overview

The UK government has [committed up to £1 billion through the Ayrton Fund](https://www.gov.uk/government/news/british-scientists-to-help-tackle-climate-change-through-new-1-billion-fund) (<https://www.gov.uk/government/news/british-scientists-to-help-tackle-climate-change-through-new-1-billion-fund>) to support clean energy research, development and demonstration (RD&D) between April 2021 and March 2026. This is part of the [wider UK commitment to tackle climate change](https://www.gov.uk/government/news/uk-aid-to-double-efforts-to-tackle-climate-change) (<https://www.gov.uk/government/news/uk-aid-to-double-efforts-to-tackle-climate-change>) and spend £11.6 billion of [International Climate Finance](https://www.gov.uk/guidance/international-climate-finance) (<https://www.gov.uk/guidance/international-climate-finance>) (ICF) over the same period.

The Ayrton Fund aims to accelerate the clean energy transition in developing countries, by creating and demonstrating innovative clean energy technologies and business models. It will demonstrate UK leadership and expertise in cutting global emissions through world-leading innovations.

It seeks to make clean energy options the most affordable, accessible and attractive options in developing countries. This supports [Sustainable Development Goal \(SDG\) 7](https://sdgs.un.org/goals/goal7) (<https://sdgs.un.org/goals/goal7>) (Affordable and Clean Energy) and [SDG13](https://sdgs.un.org/goals/goal13) (<https://sdgs.un.org/goals/goal13>) (Climate Action). It also supports the ambitions of

important initiatives such as the COP26 [Glasgow Breakthroughs](https://www.gov.uk/government/publications/cop26-world-leaders-summit-statement-on-the-breakthrough-agenda-2-november-2021/cop26-world-leaders-summit-statement-on-the-breakthrough-agenda) (<https://www.gov.uk/government/publications/cop26-world-leaders-summit-statement-on-the-breakthrough-agenda-2-november-2021/cop26-world-leaders-summit-statement-on-the-breakthrough-agenda>) and [Green Grids Initiative](https://www.gov.uk/government/news/uk-and-india-launch-new-grids-initiative-to-deliver-clean-power-to-the-world) (<https://www.gov.uk/government/news/uk-and-india-launch-new-grids-initiative-to-deliver-clean-power-to-the-world>).

Specifically, it supports RD&D around 3 themes:

- lower-cost, flexible clean energy supplies suited to the resources of developing countries
- super-efficient demand via innovative services, processes and equipment meeting the needs of poor consumers and enterprises
- smart delivery systems and resources to manage variable clean energy and reduce the costs of delivering reliable clean energy

The [Foreign, Commonwealth & Development Office \(FCDO\)](https://www.gov.uk/government/organisations/foreign-commonwealth-development-office) (<https://www.gov.uk/government/organisations/foreign-commonwealth-development-office>), the [Department for Energy Security and Net Zero \(DESNZ\)](https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero) (<https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero>) and the [Department for Science, Innovation and Technology \(DSIT\)](https://www.gov.uk/government/organisations/department-for-science-innovation-and-technology) (<https://www.gov.uk/government/organisations/department-for-science-innovation-and-technology>) jointly manage the Ayrton Fund. They do this through a portfolio of ongoing, new, and scaled-up clean energy platforms and programmes, including thematic challenge programmes, and country and regional demonstrators. Ayrton thematic challenges target technology priorities that are important for the achievement of [SDG7](https://sdgs.un.org/goals/goal7) (<https://sdgs.un.org/goals/goal7>) and [SDG13](https://sdgs.un.org/goals/goal13) (<https://sdgs.un.org/goals/goal13>), including:

- next generation solar
- sustainable cooling for all
- modern cooking
- energy efficiency
- industrial decarbonisation

- clean transport
- smart energy systems
- energy storage
- clean hydrogen
- critical minerals
- inclusive energy and leave no-one behind

Use the [Ayrton Fund Explorer Tool](https://ayrtonfund.info/) (<https://ayrtonfund.info/>) to find more information about the fund's programmes and projects across these thematic challenges.



Zembo 'Zero Emission Motorcycle Boda' in Uganda. Photo credit: Transforming Energy Access platform.

Ayrton platforms and programmes

In its first 3 years, the Ayrton Fund supported 30 clean energy RD&D platforms and programmes. These include:

[Transforming Energy Access \(TEA\)](https://tea.carbontrust.com/)
(<https://tea.carbontrust.com/>)

This FCDO research and innovation platform supports early-stage testing and scale-up of innovative technologies and business models that accelerate access to affordable, clean energy. It

helps poor households, enterprises, and social institutions in developing countries in Sub-Saharan Africa, South Asia, and the Indo-Pacific.

[Climate Compatible Growth \(CCG\)](https://climatecompatiblegrowth.com/)
[\(https://climatecompatiblegrowth.com/\)](https://climatecompatiblegrowth.com/)

This FCDO research and innovation platform develops evidence and global public goods to help countries develop and implement economic strategies and plans. It also works on policies to attract investment into low-carbon growth opportunities across various sectors, including grid-scale energy and transport.

[Clean Energy Innovation Facility \(CEIF\)](https://devtracker.fcdo.gov.uk/projects/GB-GOV-13-ICF-0037-CEIF/summary)
 [\(https://devtracker.fcdo.gov.uk/projects/GB-GOV-13-ICF-0037-CEIF/summary\)](https://devtracker.fcdo.gov.uk/projects/GB-GOV-13-ICF-0037-CEIF/summary)

This DESNZ platform aims to accelerate the commercialisation of innovative clean energy technologies in developing countries in key themes. The CEIF 1.0 and 2.0 programmes under the platform focus on industrial decarbonisation, sustainable cooling, smart energy, and energy storage.

The new Accelerate-to-Demonstrate (A2D) facility under the platform focuses on critical minerals, clean hydrogen and cross-cutting themes such as smart energy and industrial decarbonisation. These are crucial to clean energy transitions in developing countries.

[Global Challenges Research Fund \(GCRF\)](https://www.newton-gcrf.org/gcrf/)
[\(https://www.newton-gcrf.org/gcrf/\)](https://www.newton-gcrf.org/gcrf/)

This DSIT research and innovation Fund supports UK and international researchers and innovators to address important issues affecting developing countries, including access to clean energy. [UK Research and Innovation \(https://www.ukri.org/what-we-offer/international-funding/global-challenges-research-fund/\)](https://www.ukri.org/what-we-offer/international-funding/global-challenges-research-fund/) (UKRI) run GCRF Ayrton Fund activities.

Modern Energy Cooking Services (MECS) **(<https://mecs.org.uk/>)**

This FCDO research and innovation programme develops clean cooking research products. Through a consortium of world-leading UK universities and innovators, it aims to support the transition from biomass to genuinely clean cooking fuels in developing countries.

Low Energy Inclusive Appliances (LEIA) **(<https://efficiencyforaccess.org/leia>)**

This FCDO research and innovation programme focuses on improving the efficiency, performance, and availability of electrical appliances and solar technologies for off-grid and weak-grid settings. At the same time, it aims to lower their cost for consumers, particularly in Sub-Saharan Africa, Southeast Asia, and the Indo-Pacific.

Catalysing Agriculture by Scaling Energy Ecosystems (CASEE)

This FCDO research and innovation project supports innovative energy and agricultural technology businesses in Sub-Saharan Africa and South Asia. It aims to strengthen energy, agriculture, and food systems, boosting the productivity, income, and resilience of smallholder farmers. It is part the wider [Strengthening Impact Investment Markets for Agriculture \(SIIMA\)](https://devtracker.fcdo.gov.uk/projects/GB-GOV-1-300632/summary) (<https://devtracker.fcdo.gov.uk/projects/GB-GOV-1-300632/summary>) programme.

Africa Regional Climate and Nature (ARCAN) **(<https://devtracker.fcdo.gov.uk/projects/GB-GOV-1-300808/summary>)**

This regional FCDO programme supports the World Bank's [Sustainable Renewables Risk Mitigation Initiative \(SMRI\)](https://www.esmap.org/sustainable_renewables_risk_mitigation_initiative#:~:text=SRMI%20helps%20governments%2) (https://www.esmap.org/sustainable_renewables_risk_mitigation_initiative#:~:text=SRMI%20helps%20governments%2)

[0develop%2C%20finance,connected%20and%20off%2Dgri
d%20projects\) and the Africa Development Bank's
Sustainable Energy Fund for Africa \(SEFA\)
\(https://www.afdb.org/en/topics-and-sectors/initiatives-
partnerships/sustainable-energy-fund-for-africa\). These
initiatives are scaling-up proven renewable energy
technologies and demonstrating the integration of
energy storage, smart/mini-grids and new guarantee
instruments. The programme contributes to
sustainable and environmentally sound economic
development and low carbon green energy
generation and access across Africa.](https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/sustainable-energy-fund-for-africa)

**[Accelerating Smart Power and Renewable Energy
in India \(ASPIRE\)
\(https://www.linkedin.com/in/aspireta/?
originalSubdomain=in\)](https://www.linkedin.com/in/aspireta/?originalSubdomain=in)**

This FCDO country programme mobilises carbon financing to provide market-driven solar-powered induction cooking solutions. It targets households in India that are below the poverty line and use firewood as their primary cooking fuel.

[BRILHO Mozambique \(https://brilhomoz.com/\)](https://brilhomoz.com/)

This FCDO country programme is expanding rural household energy access by catalysing private sector innovation and investment and government support in Mozambique. It aims to increase domestic and business energy solutions through the supply of household solar, mini-grids, and improved cooking technologies.

**[Pacific Clean Energy Programme \(PCEP\)
\(https://devtracker.fcdo.gov.uk/programme/GB-GOV-1-
400021/summary\)](https://devtracker.fcdo.gov.uk/programme/GB-GOV-1-400021/summary)**

This FCDO regional programme aims to improve access to affordable clean energy in Pacific Island Countries by increasing investment into renewable energy. It includes a Regional Clean Energy Investment Fund that mobilises funding and supports local developers to build a pipeline of viable

renewable energy projects. It also includes the Papua New Guinea Clean Energy Investment Fund in partnership with Australia. This provides grants to civil society organisations to scale-up clean energy access in remote and marginalised communities not served by government systems.

Pioneering a Holistic approach to Energy and Nature-based Options in MENA for Long-term stability (PHENOMENAL)

(<https://devtracker.fcdo.gov.uk/projects/GB-GOV-1-301142/summary>)

This regional FCDO programme supports innovations and investment in renewable energy, transport, hydrogen and low carbon industry in the Middle East and North Africa (MENA). This includes green hydrogen, industrial decarbonisation, and e-Mobility.

Powering Sierra Leone's Hospitals

(<https://devtracker.fcdo.gov.uk/programme/GB-GOV-1-301526/summary>)

This FCDO country programme funds the installation of stand-alone solar systems in off-grid hospitals and on-grid referral facilities that have unreliable grid power in Sierra Leone. It ensures the availability of referral services that are crucial to ending the preventable deaths of women and children.

Ukraine Resilience and Energy Security Programme (URES)

(<https://devtracker.fcdo.gov.uk/countries/UA/>)

This FCDO country programme includes an Energy Security Innovation Challenge Fund that will support UK-led innovations for applied research that can modernise Ukraine's energy sector.



Doctors performing surgery in 1 of 6 newly electrified hospitals in Sierra Leone. Photo credit: Powering Sierra Leone's Hospitals.

Further information about the fund

Ayrton Fund Explorer

The [Ayrton Fund Explorer Tool \(https://ayrtonfund.info/\)](https://ayrtonfund.info/) enables you to find relevant knowledge, initiatives, funding opportunities and partnerships. It includes many of the programmes and projects that the Ayrton Fund supports. You can search by need, interest and region.

For example, the Explorer Tool can help you find relevant Ayrton Fund programmes and projects if you're:

- an innovator looking for funding for an energy storage project in Africa
- writing a research report covering energy access in the Indo-Pacific
- looking for training opportunities in South Asia



Solar home system owner in Mozambique. Photo credit: BRILHO programme.

Access to funding

The Ayrton Fund combines and co-ordinates a range of funding platforms and programmes targeting different RD&D needs. Through them, it supports the clean energy transition in developing countries.

You may access Ayrton Fund support through one of the funded platforms or programmes. These include those listed on this page, and (where applicable) their calls for proposals and funding windows. However, not all programmes will include a direct route to access funding. You can use the [Ayrton Fund Explorer Tool \(https://ayrtonfund.info/\)](https://ayrtonfund.info/) to find relevant programmes and projects.

You can also keep up to date on calls for proposals and opportunities for engagement on the relevant programme websites and social media. You can also follow the Ayrton Fund [Twitter \(https://twitter.com/ayrton_fund\)](https://twitter.com/ayrton_fund) and [LinkedIn \(https://www.linkedin.com/company/ayrton-fund/\)](https://www.linkedin.com/company/ayrton-fund/) accounts.



Young Africans supported with job placements in clean energy access businesses. Photo credit: Transforming Energy Access platform.

Government departments

The Ayrton Fund is a cross-government collaboration led by 3 departments. Find out more information on the wider work of each of these departments:

- [Foreign, Commonwealth & Development Office \(FCDO\)](https://www.gov.uk/government/organisations/foreign-commonwealth-development-office)
(<https://www.gov.uk/government/organisations/foreign-commonwealth-development-office>)
- [Department for Energy Security and Net Zero \(DESNZ\)](https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero)
(<https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero>)
- [Department for Science, Innovation and Technology \(DSIT\)](https://www.gov.uk/government/organisations/department-for-science-innovation-and-technology)
(<https://www.gov.uk/government/organisations/department-for-science-innovation-and-technology>)



Solar irrigation system powered by solar water pumps. Photo credit: Low Energy Inclusive Appliances programme.

Contact details

For further details or questions about the Ayrton Fund, email: AyrtonFund@fcdo.gov.uk

You can [subscribe to the Ayrton Fund newsletter \(https://carbontrust.us20.list-manage.com/subscribe?u=c358c85bac04572540c636e92&id=5d0f9c4e45\)](https://carbontrust.us20.list-manage.com/subscribe?u=c358c85bac04572540c636e92&id=5d0f9c4e45) to receive news, updates, and events information.

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