

# Transforming energy systems

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Equitable access to affordable, sustainable and productive energy services for all



# In brief

Global energy systems remain hugely unequal — billions of people live without electricity or clean cooking facilities. Countries need to support a big shift in energy policy to change this, while reducing their use of carbon to mitigate the effect of climate change. There has been progress: countries have agreed to make this change through Goal 7 of the Sustainable Development Goals and the Paris Agreement on climate change. But, in order to realise these ambitions, there must be a shift in mindsets, planning and investment flows to enable a move from the current ‘top-down’ centralised system to a more decentralised energy sector, more responsive to users’ needs.

At IIED, we work with partners to make sure that local priorities inform national and global debates on how to shift to clean, affordable and productive uses of energy for all.

## Our ambition

We are working with NGOs, energy providers and governments. Through a mixture of research and dialogue, policy engagement and on-the-ground experimenting, we want to:

- **Build people-centered and resilient energy services.** Promoting energy delivery models informed from the ‘bottom-up’ and tailored to local contexts and end-user needs will create more responsive energy systems that are relevant, resilient and sustainable over the long term
- **Encourage innovative financing for decentralised energy and for reaching the poorest.** Identifying the priorities, mechanisms and models by which public and private finance can be channeled toward many small-scale, decentralized projects and providers is vital for achieving energy access goals
- **Promote productive uses of energy to improve local livelihoods.** Energy services need to ‘go beyond the household’, providing power for irrigation, food processing and building local businesses, particularly in rural areas. Working out the types of collaboration, policy and business models for this is the next big challenge
- **Ensure more inclusive policymaking on energy.** Achieving change at scale requires joined up, holistic approaches. We create new spaces for collaboration, co-creation and innovation among people currently stuck in ‘silos’, excluded from decision making or facing competing incentives. Involving civil society organisations (CSOs), small and medium enterprises (SMEs) and non-energy sector stakeholders — such as agriculture, water, gender — is a priority
- **Drive more equitable and climate-resilient benefits from large-scale, national energy investments.** The shift to renewables creates a unique opportunity to learn the lessons from large-scale fossil fuel projects and invent more equitable investment models. It could create local jobs and development around sites, improve accountability and transparency, and avoid the elite capturing the benefits.

# Our approach and activities

IIED's energy portfolio has evolved from working on social impacts and accountability issues in large-scale energy projects to focus on access to energy for low-income communities. We also work closely with IIED's climate team to promote holistic approaches to the challenges of climate change and energy access.

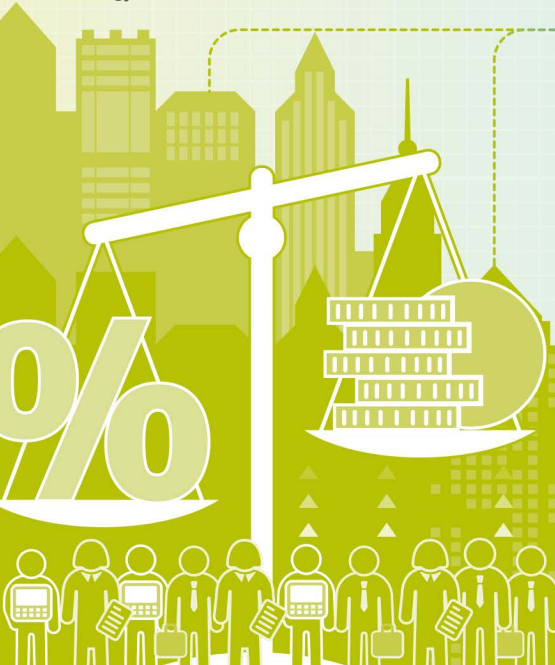
We particularly focus on decentralised energy, small-scale providers and mixed models for delivery, which can reach poor, off-grid communities and address systemic barriers in the energy system.

## **1. Decentralised energy delivery: ensuring pro-poor access to energy through integrated and responsive delivery models.**

With a combination of case studies and demonstration projects in countries such as Argentina, Peru, Nepal, Nigeria, Kenya, Tanzania, Uganda and South Africa, we have learnt which energy service delivery models work and do not work in different contexts. Knowing this has helped us to develop a practical 'design framework' that analyses, evaluates and operationalises energy services based on a systematic and more holistic understanding of end-user needs and contextual factors. The result: greater impact in often tight resource constraints, enhanced stakeholder buy-in and sustainable, bankable projects that meet the concerns of would-be investors.

## **Innovative and blended finance:**

Channeling public and private finance to provide energy access for low-income communities



## **Inclusive policymaking:**

Working with stakeholders to influence national and international priority setting



## 2. Productive uses from energy: improving livelihoods and maximising development benefits.

We are working to understand interventions needed — from funding agricultural advice to market analysis — in policy and practice to maximise productive uses from energy. This involves researching end-user needs and different energy delivery models for communities. We have explored these themes in our work on micro-grids for fishing communities in Lake Victoria, Kenya and mini-hydro in rural Tanzania.

## 3. Innovative and blended finance: channeling public and private finance to provide energy access for low-income communities.

Achieving universal access energy by 2030 will require huge investment in decentralised energy systems and renewables, such as solar home systems and clean cooking facilities. Yet current funding flows are still geared toward large-scale models, and the roles and responsibilities of

public versus private finance in energy access investments are not well understood. In short, financing has to be more targeted, tailored and 'blended' to suit distinctive energy needs across communities and markets. Our work examines financial flows and innovative models for facilitating investment, and how public funds and policy can be used most effectively to attract private investment into decentralised, pro-poor energy access.

## 4. Inclusive policymaking: working with stakeholders to influence national and international priority setting.

Through our work with the Alliance of CSOs for Clean Energy Access (ACCESS) and our energy change lab in Tanzania in partnership with Hivos, we are helping to build more inclusive spaces for exploring ideas and innovative solutions to inform policymaking on energy. By disseminating what we have learnt worldwide, we aim to lead the charge on developing more 'citizen-centred energy systems'.

### Decentralised energy delivery:

Ensuring pro-poor access to energy through integrated and responsive delivery models



### Productive uses from energy:

Improving livelihoods and development benefits





# Partner snapshots

IIED's energy researchers work with a wide range of partners including energy suppliers, civil society organisations and governments. We have worked with partners in Argentina, Peru, Nigeria, Kenya, Tanzania, South Africa, Nepal, China, Turkmenistan, Kazakhstan and Azerbaijan. Through collaborations with like-minded institutions, we further our understanding of, and solutions to, energy poverty and pro-poor energy access.

## CAFOD: designing and delivering pro-poor energy services in Indonesia and South East Asia



Our collaboration with the official Catholic aid agency for England and Wales (CAFOD) has shown that there is no 'one-size-fits-all' replication for energy service provision. Together we are deepening our understanding of how energy services should be designed to meet the needs of people living in poverty. We are taking our participatory energy service design approach and adapting it to suit local contexts in South East Asia — with ground testing and monitoring of the design and implementation process.

## Hivos: energy labs in Tanzania



Our partnership with development organisation Hivos is taking a social innovation or 'change lab' approach to catalyse positive disruptions to green energy in a way that puts citizens at the centre. Starting in Tanzania, the IIED-Hivos energy change lab is focused on supporting future leaders and change-makers — from enterprise, government and civil society — to drive the energy transition through providing expert support, experiential learning and a community of practice. We are focused on three themes: decentralised energy, jobs and accountability in the energy sector.

## ACCESS: influencing global policy and priority setting on energy



Our work with the Alliance of Civil Society Organisations for Clean Energy Access (ACCESS) aims to ensure that civil society actively participates in national, regional and international decision making on the Sustainable Development Goals to achieve universal energy access for all (SDG 7). We do this by providing evidence for joint civil society organisation policy positions and supporting dialogue events with policymakers (see, for example, [pubs.iied.org/G03811](https://pubs.iied.org/G03811)).

# Get involved

IIED's energy team is keen to bring in new ideas and evidence from others. Get in touch with a member of our team to share your knowledge and find out how you can get involved:

**sarah.best@iied.org; ben.garside@iied.org**

## Access to energy reports

Bellanca, R, Garside, B. An approach to designing energy delivery models that work for people living in poverty. IIED, London. [pubs.iied.org/16551IIED](https://pubs.iied.org/16551IIED)

Best, S. Demanding supply. IIED, London. [pubs.iied.org/16594IIED](https://pubs.iied.org/16594IIED)

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Rai, N, Best, S, Soanes, M. Unlocking climate finance for decentralised energy access. IIED, London. [pubs.iied.org/16621IIED](https://pubs.iied.org/16621IIED)

Wilson, E, Rai, N, Best, S. Sharing the load. IIED, London. [pubs.iied.org/16560IIED](https://pubs.iied.org/16560IIED)

Best, S. Growing Power: Exploring energy needs in smallholder agriculture. IIED, London. [pubs.iied.org/16562IIED](https://pubs.iied.org/16562IIED)

Stakeholder Democracy Network. Solar lanterns in Niger Delta communities. IIED, London. [pubs.iied.org/16604IIED](https://pubs.iied.org/16604IIED)

Yadoo, A. Delivery models for decentralized rural electrification: case studies in Nepal, Peru and Kenya. IIED, London. [pubs.iied.org/16032IIED](https://pubs.iied.org/16032IIED)

Tait, L, Wlokas, HL, Garside, B. Making communities count: maximising local benefit potential in South Africa's Renewable Energy Independent Power Producer Procurement Programme (RE IPPPP). IIED, London. [pubs.iied.org/16043IIED](https://pubs.iied.org/16043IIED)

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### About our funders

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