



**Power Up: the business case for using adaptation funding to increase access to green, affordable energy.**

*This resource has been created by Power Up, the coalition campaign uniting and amplifying African voices calling for new investment in energy access through the COP/UNFCCC process. Learn more about the campaign at [PowerUpNow.org](http://PowerUpNow.org).*

### **The need for climate adaptation**

Africa bears less responsibility for climate change than any other continent – but its people are among those in greatest danger from it. They are already experiencing more extreme weather, shifting patterns of rainfall and rising sea levels. These problems will grow in the years ahead, even if the world achieves its most ambitious emission reduction targets.

Climate change brings a huge human and financial costs. In Africa these include a [fall in wheat yields of up to 21%](#), and the spread of diseases such as malaria and dengue fever to new regions. The Global Center on Adaptation (GCA) [reports that](#) climate change will cause a 2-4% annual GDP loss in Africa by 2040. The organisation adds that the brunt of the impact will be borne by the poor, women, and currently marginalised or excluded communities.

There is an urgent need for climate adaptation, measures to prepare societies and economies for the effects of rising global temperatures.

The GCA has outlined how, in the face of climate impacts, the benefits of adaptation measures are almost always more than twice the costs, and often more than five times higher. Moving quickly to adapt is especially beneficial, with a benefit-cost ratio for early action of at least 12 to 1.

### **The energy access challenge**

The lack of access to energy in communities most threatened by climate change is a major barrier to adaptation. In Sub-Saharan Africa, about 600 million people go without electricity, and about 900 million without modern cooking products.

Energy is essential for key adaptation solutions – such as strengthening agricultural through improved irrigation and cold storage, equipping clinics to deal with new or increased health challenges, and connecting people with news and information about climate threats. It is also a foundation for economic resilience.

Energy access is lowest in remote, rural areas, and among communities hard-hit by poverty. This overlaps with areas and communities most threatened by climate change – and so in greatest need of adaptation support.

All these factors explain the urgent need to put increased energy access funding at the heart of adaptation plans, in Africa and around the world, and support the frontline organisations delivering energy access. Locally generated renewable energy – using technologies such solar home systems,

biogas digesters and solar minigrids – brings these benefits cheaper, faster, and to more people, than new fossil fuel infrastructure.

## **How can green, affordable energy drive effective adaptation for all**

### **Jobs and work**

Economic resilience underpins all adaptation measures – and green, affordable energy has huge potential to strengthen economic resilience. Globally, it could [create 14 million jobs](#) by 2030. And research from African nations [suggests that](#) for every new job in the off-grid energy sector, up to five times more employment is created through gained productivity.

### **Food security**

Improved technologies, new business models and the falling cost of solar energy can all help boost or protect agricultural productivity in the face of rising temperatures, more frequent extreme weather and changes to rainfall patterns.

93% of African farmland relies on rainfall for irrigation – but rain patterns will be heavily disrupted by climate change. In East Africa, the frequency of drought years has [doubled](#) since 1999. Solar-powered water pumps can provide cost-effective irrigation, particularly for vulnerable smallholder farmers.

For a typical farm in Kenya, the cost of irrigating one acre for five years [using a solar pump](#) is estimated at USD 3,000 – compared to USD 6,000 when using an equivalent diesel pump. For high-value crops, the upfront cost of a solar water pump is recovered in 12–18 months through increased yields.

In sub-Saharan Africa, more than 40% of food [perishes before it reaches the consumer](#), threatening nutrition and incomes, and rising temperatures will only increase the problem. Post-harvest food losses are already [estimated](#) to be worth USD 4 billion per year - or enough to feed at least 48 million people.

Solar-powered cold storage rooms are an effective and inclusive solution in off-grid areas, made accessible to marginalised farmers through shared ownership, lease or ‘pay-per-use’ business models.

### **Health**

Climate change will create and increase health risks across Africa – but 60% of African health facilities [go without electricity](#). The UN reports that warmer temperatures and higher rainfall increase the risk of diseases such as dengue fever, malaria and yellow fever, and scientists have [predicted that](#) if emissions continue to increase, heat-related deaths of children under five in Africa could double by 2050.

### **Digital connectivity**

Connection to information through digital devices is a key benefit of energy access. Connectivity can help Africans prepare for, endure, and recover from natural disasters set to increase because of climate change.

A report by the World Meteorological Organization found that even in African countries that currently have the data to predict imminent natural disasters, only [44% of their people were reachable](#) through national early warning systems. Such systems save lives but also limit economic

damage – looking beyond Africa, a study found every dollar invested in Samoa’s cyclone early warning system created [six dollars in benefits](#).

Connectivity also supports education and awareness about key adaptation topics, from climate smart agriculture to lowering indoor temperatures in the home and workplace. Access to digital banking, impossible without affordable energy, is also a platform for economic resilience.

### **The case for action at COP27**

Mahmoud Mohieldin, the United Nations climate change high-level champion for Egypt, says November’s summit in his home country must focus on adapting to life in a changing climate. African leaders are already rallying round the cause of greater funding for climate adaptation at COP27 and beyond – calling for richer nations to raise their ambition and honour existing commitments.

The worsening impacts of climate change – felt more keenly in Africa than anywhere else – mean the issue of adaptation is likely to gain more attention in Sharm El-Sheikh than at any previous COP summit.

In this context, the time is right for African leaders to raise the well-established [business case for an African clean energy transition](#), as the cornerstone of the continent’s adaptation efforts.

### **Next steps: the path to Powering Up**

At COP27 and beyond, donor countries and international climate finance funds must commit to new and additional funding for joint adaptation and energy access projects in low and middle income countries, and ensure 50% of all future climate finance is dedicated to adaptation. Funders should:

- Increase their portfolio value of joint energy access projects and adaptation projects in vulnerable countries.
- Remove or lower co-funding requirements for energy access and adaptation projects.
- Work with other funders co-finance adaptation and resilience projects to unlock extra private sector investment.
- Make the application process for energy access and adaptation projects easier.
- Increase the catalytic potential of funding – recognising that a major value of donor funding is its ability to draw in private sector investment, vital to securing energy access for all.

Alongside these actions for funders are tasks that can only be addressed collaboratively by governments, businesses and civil society, inside and outside Africa.

One is ensuring recipient governments are able to mainstream energy access as a national and regional priority, putting it at the heart of their adaptation plans. This can be done by supporting better estimates of need and financing roadmaps, and by bringing ministries working on energy access and climate adaptation closer together.

Another task is supporting and learning from frontline enterprises and organisations delivering energy access. They offer essential insights on challenges that will need to be overcome to power up communities – such as the difficulty of acquiring finance, recruiting a skilled workforce, and reaching the most marginalised groups. Their voices – along with those of people affected by energy poverty – are an overlooked but invaluable resource.