



Global Energy Alliance
for People and Planet

Let's Change Energy

AN INTRODUCTION TO GEAPP

We are a collective movement working to unlock green energy access in Africa, Asia, Latin America and the Caribbean to secure an inclusive and resilient future for all.

The Global Energy Alliance for People and Planet (GEAPP) was created to address the defining challenge of our time - the transition to renewable energy. It was born of a recognition that the current pace of change is too slow to meet the net zero ambitions set under the Paris Agreement, and too uneven to meet the urgent development needs of emerging economies.

Set up by the IKEA Foundation, The Rockefeller Foundation and the Bezos Earth Fund, we have since been joined by global institutions and dozens of partners, all sharing a common belief: that green energy access in the world's emerging markets is fundamental to tackle the climate crisis and end inequality.

GEAPP takes a fresh approach to partnership; collaborating with country governments and communities, bringing together technology, policy and regulation, development finance, and private sector partners to drive transformational action and achieve our ambitious goals.

Avert

4 gigatons of
carbon emissions

Expand

Energy access for
1 billion people

Enable to improve

150 million sustainable
livelihoods



0.75 BN
people with no
access



1.6 BN
people who lack
access that is reliable
and affordable

1.25 BN
people who do not
consume enough to
make a meaningful
difference

The defining challenge of our time

Without green energy, every other form of progress is impacted. Yet today, half the world's population lives in energy poverty and the global temperature rise will take a disproportionate toll on these communities, undermining health prospects, education, employment and gender equality, particularly among the young.

Renewables are producing the cheapest electricity in history. But not for everyone. For many, green electricity is expensive or unavailable.

The share of total energy consumption in Africa and Asia drawn from renewables is less than 10% and these regions receive only 13% of global green energy financing.

Meanwhile, estimates suggest that climate change will cost Latin America and the Caribbean – a region teeming with renewable energy potential and also one of the most climate-vulnerable locations on earth, between 1.5 and 5% of GDP by 2050. Because while the provision of renewables is high at 61% of the mix, the region suffers pressing issues related to access, affordability and energy resilience.

If emerging economies use fossil fuels to rise out of energy poverty, by 2050 75% of all emissions could be generated by these countries. And net zero will be impossible to attain.

Green energy deployment has the power to benefit the 750 million people who lack any access to energy; the 1.6 billion people who lack access that is reliable and affordable; and the further 1.25 billion people who do not consume enough electricity to make a meaningful difference to their economic prospects.

A green energy tipping point that powers progress for people and planet

The climate crisis is not impending, it is here right now for all of us and business as usual is failing to address it. Change is needed, and fast. Change, which is sustainable and robust, remaking the status quo, primed to work rapidly.

GEAPP was set up to transform energy systems, in the knowledge that the urgency of the transition requires infrastructure overhaul, commercial turnarounds and new mindsets translated to practical solutions and investment replicated to make lasting difference on the ground.

We act at the tip of the arrow. That means deploying our agile capital (debt, equity, guarantees, grants etc.) to test ideas and bring them to scale, then building a movement around these sectors to create sustained, irreversible momentum. All with the goal of supporting systemic shifts in the green energy transition landscape.

Our deep, detailed work has helped identify two areas, which we believe can be applied in multiple markets to effect global system change with the power of the Alliance gathered behind them:



01 Accelerating the uptake of distributed renewable energy, to provide fast, clean, cheap power where it is needed most.



02 Deploying Battery Energy Storage Systems to strengthen grids and enable them to rapidly adopt high levels of least-cost, variable renewable energy.

The third focus area, ensures we continue to develop other parts of the energy system with the potential to make a meaningful difference:



03 Piloting programs to design, test and later scale, transformative approaches including: utility scale renewables; fossil fuel decommissioning; transmission and distribution; productive use of energy; green industrialization; and e-mobility.

Last but not least we are single-minded about:



04 Ensuring the energy transition is just, equitable and inclusive by focusing positive impacts on women, youth and marginalized communities.

At the very heart of GEAPP's work is the need to nurture green economies, ensuring that green energy results in new and improved jobs and significant livelihood improvements. We believe that the provision of renewable energy must foster gender equity; without an intentional focus on women, we will not achieve full economic gains from the transition. It is only by creating economic growth and capturing value from new green industries, that we will capture the political will to enable it to grow. This means a focus on new jobs, new industries, driving productive use of electricity – whether that's fridges or irrigation, and retraining and reskilling, all in partnership with governments and partners, with women, youth and low-income groups at the centre. In this way, the accelerated uptake of green electricity creates new value and drives economic development for everyone.

Collaboration at our core

GEAPP was launched at the United Nations Climate Change Conference, COP26, in 2021 to address the gaps that persist in bringing about the green energy transition; whether that's outdated regulation, capital barriers or the absence of private sector capital.

These are persistent, tightly linked challenges that require bold, united multi-sectoral coordination, calling on the strengths of diverse actors to charge a new trajectory for a renewable energy future that is just, equitable and enduring.

A powerful alliance of partners

The 'alliance' you find in our name reflects the fundamental aspect of GEAPP's approach: committed partnerships, which enable us to channel our collective ambition to bring longer-term impact at speed. The Alliance represents philanthropy, government, finance, technology, development and communities, bringing complementary sources of capital, delivery capacity, deep expertise and reach – from the global to the hyper-local. Together, we are forming an ever widening and diverse coalition of individuals, institutions, and communities, driving a groundswell of action.

A movement of change

Recognizing the magnitude of the task ahead and the ambition of our shared goals, we aim to inspire a broader movement: one that galvanizes powerful circles of influence and is shaped by people and communities living with energy poverty and the effects of the climate crisis. Working together, we surface new pathways and equip and enable change agents to connect and join forces across the ecosystem.

An independent organization

GEAPP is operated by a focused, fast-moving team based in Africa, Asia, Europe, Latin America and the US that syncs and combines with the resources and reach of our Alliance partners. We deploy our rare and nimble capital and shared on-the-ground expertise towards targeted interventions. Monitoring, Evaluation and Learning (MEL) sits at the heart of our programmatic design and decision making, enabling us to stay independent, take calculated risks, and fail or scale fast.



...inspired by a spirit of collaboration, anchored in:

Reciprocity, respect and shared leadership

Recognizing the value of diverse perspectives, cultures and deep contextual knowledge and experience, we listen, respond and only then deploy co-created solutions. We do so in tandem with our partners, building common understanding of goals, and mutually reinforcing roles with a relentless focus on outcome.

Trust and intentionality

GEAPP's singular focus is accelerating the green energy transition, instead of a fragmented approach determined by the priorities of any single organization. We understand the major market barriers where the intervention of the Alliance can play the greatest role. Often the greatest opportunities come from our trusted relationships and champions in both government and communities, as we align close country work to national priorities.

Flexibility

Guided by non-return motives, the flexibility of our capital allows us to be patient, risk tolerant and bypass institutional constraints that hold others back. We act at the greatest points of leverage, deploying targeted capital to test ideas and bring them to market with sustained and irresistible momentum.

GEAPP operates at the invitation of governments in Africa, Asia, Latin America and the Caribbean.

We currently focus our efforts on Brazil, DRC, Ethiopia, India, Indonesia, Nigeria, South Africa and Vietnam, where we have long-term programs and in-country teams. Together this represents over 50% of the world's energy poor.

We then test, pilot and roll out replicable and scalable solutions from these countries to locations, which exhibit common traits or opportunities. We reach 80+ countries through our wider Alliance, drawing on our partner capabilities and shared efforts. We stay alert for opportunities where renewed political will can underpin rapid acceleration in a given country.



Driving transformative change

We support countries through three change levers:



01 Government enablement

We invest in upstream, public capacity building to create the environment for green energy interventions and energy sectors attractive to commercial capital. This work is critical to making progress as it better enables governments to deliver on priorities, gives clear direction to donors, increases deployment efficiency, and helps de-risk markets.

ALLIANCE IN ACTION

Steering the energy transition in Vietnam



Vietnam achieved total electrification by 2017 and has pledged to become carbon neutral by 2050. It is a regional leader in renewable energy with installed capacity of 21GW but faces power shortages due to its lack of transmission infrastructure and renewable energy integration. The power sector needs \$137bn to switch to green energy sources and meet increased demand for power. GEAPP's work in Vietnam began in February 2022 liaising closely with government on Vietnam's Just Energy Transition Partnership. This has included linking up lessons and knowledge exchange with two other JET-P countries - Indonesia and South Africa. One example is the sharing of South Africa's experience with its Presidential Climate Commission – a big tent coalition of partners including private sector, government, communities and labour, which helps articulate the need for an energy transition, which is universal. GEAPP has been able to share the benefits of this model with the Vietnam team. It has also provided capacity building in-country, helping establish a dedicated JET-P ministry alongside USAID, UNDP, GFANZ and IPG.

02 Catalytic finance

We deploy a wide range of blended finance and flexible capital solutions enabling organizations to co-invest in order to multiply funds. Closing the green energy investment gap in developing countries requires new approaches to financing. We mobilize capital and complement the activity of our partners making capital available through platform investments and direct investments, providing concessional capital, guarantees, or viability assistance, all designed to nurture projects, mobilize extra funds, and demonstrate transactions to help crowd in additional capital.

ALLIANCE IN ACTION

Shining a light on opportunity in DRC



As the second largest unelectrified population in the world, DRC has the potential to move the dial on energy access in Africa. This huge country spans 2.35 million square kilometres with a population of over 102 million people. Getting stuff done in DRC can be fiendish. Winning the confidence of investors to take on the macro risk is tough but necessary as the private sector has a critical role to play. In July 2023, GEAPP invested in mini grid developer Nuru's Series B round. This investment will boost three projects in the east of the country, eventually serving 20,000+ households and SMEs. Indeed, Nuru's Bunia site is slated to become the largest off-grid solar hybrid metro grid in sub-Saharan Africa.

03 Market shaping

We support entrepreneurs to foster sustainable businesses, enable market-makers to build pipelines and create bankable projects. Driving long-term system change will almost always require pilot projects, successful companies that overcome first mover disadvantages, track record and proof points that reduce perceived or actual risk for others, and project pipelines able to attract new market entrants or justify new investment. GEAPP works closely with the private sector, helping demonstrate new business models and providing the flexible venture support that enables them to explore new sectors.

ALLIANCE IN ACTION

Joining up the dots in Nigeria



In Africa's most populous nation, 85 million people lack reliable access to electricity. The country's main grid produces 4GW of actual operating capacity. To achieve universal electrification by 2030, the country requires a minimum of \$25bn of investment across mini grids, standalone solar, and grid extension. GEAPP's vision is to get Nigeria's distributed renewable energy sector moving forward sustainably while the main grid is improved and extended in reach. GEAPP is delivering multiple interventions at speed including funding an Energy Transition Office; introducing results-based financing; supporting the nascent venture scene; aggregating procurement; and creating new local currency platforms. On the demand side, working with RMI and the Rural Electrification Agency, GEAPP is helping to grow productive use of mini grid supply, while in local markets and communities GEAPP finances productive appliances such as freezers to help entrepreneurial businesses grow.

GEAPP's focus is to dramatically expand two areas – Distributed Renewable Energy and Battery Energy Storage Systems, while continuing to test and pilot a wider range of possible solutions over time.

Accelerating uptake of distributed renewable energy

Distributed Renewable Energy (DRE) is crucial for improving energy access today, while strengthening the electricity grids of the future. By integrating DRE into the power system you reach people faster, you ramp up reliability, you cut carbon, you save money, and you build a more resilient system. The inherent scalability of mini grids and other DRE systems means that these systems – mini grids, standalone solar, and grid-integrated systems – can support emerging multi-kilowatt loads associated with smallholder farming, light commercial, community factories, and schools, as well as multi-megawatt loads on urban and semi-urban distribution circuits.

DRE directly supports economic development. For example, at scale solar mini grids could deliver power to c.500 million people by 2030. A decade of piloting has yielded important insights and helped develop technology, logistics, and viable business models. Costs have dropped, and we now have line of sight to the tariffs that will outcompete diesel, strengthen the grid, and enable the sector to scale rapidly.

As part of a coalition dedicated to driving the uptake of DREs, GEAPP will seek to deploy a near-term 500MW of DREs, demonstrating that:



Isolated grids are best served by DRE solutions, outcompeting diesel in islands and cities.

Weak grids can integrate DREs to deliver better service to consumers, cut carbon, and improve utility economics.



DRE solutions developed alongside productive use demand can rapidly stimulate economic development in underserved areas.

By proving the business cases, helping developers and investors make a bridge to scale, and building a movement to accelerate progress, the Alliance will support the deployment of a mature industry, providing least-cost power to those who need it most.

ALLIANCE IN ACTION

Staying the course in Myanmar

In Myanmar, more than 30 million people lack affordable, reliable energy access – that’s half the population. Since the coup in February 2021, most international organizations have left the country. GEAPP has continued its work, partnering solely with the private sector. Projects focus on driving the supply side by funding and providing venture support to solar energy developers. Financing problems are also being addressed with skills and credit training for local banks to help demystify DRE as an asset class. We’ve also designed a partial credit guarantee facility in local currency in partnership with USAID, to incentivize commercial banks and microfinance institutions to lend to SMEs in the agricultural value chains. GEAPP and partners fund a \$15m partial credit guarantee, which will be used as leverage with commercial banks and DFIs to mobilize more than \$60m in local financial and development capital by 2026.



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Building resilience in Haiti

Two thirds of Haiti’s population lack electricity access; representing 60% of the unelectrified population of Latin America and the Caribbean. In Haiti’s rural areas, solar PV-based mesh grids combine the simplicity of a solar home system with the resilience of a grid, and the long-term customer service of a utility. By eliminating centralized generation and distribution, supply remains uninterrupted if lines are blown down by a hurricane or disrupted by an earthquake. GEAPP is supporting Alina Eneji to test mesh grids at scale in the rural Marchand Dessalines area, deploying a ‘lease to own’ model to finance productive use appliances such as fridges. GEAPP connected Alina Eneji with the Fonkoze Foundation, a local microfinance company to offer credit, business training, and aftersales services, making mesh grids a viable option and driving demand. Following the success of the initial 1,000 household pilot, GEAPP and Alina Eneji will now expand the scheme to 4,000 connections, serving 18,000 people on the island.



Deploying Battery Energy Storage Systems

The future renewable energy mix will primarily derive from variable sources like solar and wind because they are the cheapest and most widely available. Except the sun doesn't always shine and the wind doesn't always blow.

Battery Energy Storage Systems (BESS) solve this variability. GEAPP aims to enable ~200MW of BESS by 2024 through a mix of direct GEAPP high-risk capital and other concessional and commercial funding. By doing this we can reframe battery storage as a pathway to a reliable, renewable energy future and seed this \$100 billion market.

As part of a comprehensive Best of the BESS consortium, a multistakeholder move to galvanize a long-term reframing of energy systems in Africa, Asia, Latin America and the Caribbean via energy storage, GEAPP will:

Stimulate the uptake of BESS in emerging markets by identifying up to 30 countries that can credibly deploy BESS in the next five years and fold them into a managed 'race to the top'.

Create a funding package for the highest impact projects using philanthropic capital, concessional debt, and commercial debt.

Document examples of the value BESS provide by refining detailed national and utility planning and processes – a key step in developing regulations and markets that enable BESS:

- Build a pipeline of opportunities to rapidly mature a low-risk market for investors by identifying a critical set of projects to show the value of BESS.
- Gather a global movement to encourage speed and spread of uptake by promoting the success of and the lessons learned from real projects.

GEAPP sponsored BESS projects are already underway in Malawi and India, with program development discussions ongoing in Vietnam, Latin America and the Caribbean. This work is strongly supported by GEAPP's Global Leadership Council (GLC) – a coalition of nearly two dozen global leaders who come together to provide critical, impartial support to ensure the optimal return on GEAPP's philanthropic capital.



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BESS in India

At COP26, India committed to reach net zero emissions by 2070 with a plan to draw 50% of its electricity from renewable energy sources by 2030. GEAPP is helping India achieve this ambitious target in a number of ways. One project with great transferability is work to facilitate the first wave of Battery Energy Storage Systems; partnering with India's distribution utilities to improve grid reliability and quality. That's important because the upstream policy push for renewable energy - expected to increase by over 250% by 2030 - will create capacity issues for existing grid infrastructure. GEAPP has begun with a 40MWh pilot in New Delhi where we provide policy support at state level and train utilities and developers how to upskill local talent. We're also supplying concessional finance to get pilot projects off the ground, working with the regulator to ensure battery systems are properly monetized. The objective is to create a scalable pathway for 1GW storage projects by 2026 with further project pipeline and financing support by Alliance partners.

Piloting programs in other areas of the energy system

A commercial solution really takes off when it provides a compelling value proposition that is clearly better than the alternative. When that moment arrives, technologists, manufacturers, investors, and most importantly, consumers vote with their feet.



GEAPP's pilot programs build the case for these scalable solutions; looking for the tipping points in a set of sectors that are critical for the energy transition and could scale globally. These include: utility scale renewables; fossil fuel decommissioning; transmission and distribution; productive use of energy; green industrialization; and e-mobility.



By making targeted interventions including financing, building market availability, increasing supply chain capacity and demand we are able to show what is possible, persuading capital sources that this is an opportunity to be explored, a place where adoption can become exponential. As with solar PV and on-and off-shore wind energy, the governing principle is to create enough proof points, market certainty and catalytic financing that an ecosystem of players forms and commits their time and resources to propel the industry forward.



When an option becomes both the cleanest and the cheapest, you can get commercial markets and capitalism to really work with you to realize a transformation. That is what we keep front of mind with these pilot programs.



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Piloting EV buses in India

Buses are the backbone of India's public transport system. Right now, 98% run on diesel, while only 2% are electric. The country's state transport utilities, which oversee the buses, are in dire financial straits and cannot afford to buy fleets of electric buses. So, GEAPP has begun working with government on a plan to allow state transport utilities to buy into a bus-as-a-service scheme. This would allow cities to run electric buses cheaply – the per kilometre rate is almost 40% lower than their diesel equivalents – and cleanly. In partnership with the Government of India and the US Government, GEAPP has crafted a payment security mechanism, which will guarantee payment to the electric bus providers for three months. If, after that time, state transport utilities continue to default on payments the money will be taken from budgetary allocations and paid directly to the provider. India has 1.8 million buses so the potential is enormous.



Ensuring the energy transition is just, equitable and inclusive

GEAPP is strongly committed to not only furthering an equitable green energy transition, but simultaneously meeting the realities of energy poverty while supporting job and income creation.

This finds voice in all GEAPP activities but a number of targeted initiatives specifically direct and focus work in this area, particularly with regard to dispossessed populations, women, youth and low-income communities:



Just Energy Transition Partnerships

GEAPP partners with governments to help implement these climate finance initiatives in-country and to join up learnings between countries, currently South Africa, Indonesia and Vietnam to protect and promote the 'just' element of the energy transition. Ensuring the transition is just and equitable also represents one of the main pillars of our strategy in Latin America and the Caribbean with its focus on universal access and strengthening the role of the communities in energy transitions.

Women experience the greatest repercussions of climate change, which amplifies existing gender inequalities and poses unique threats to their livelihoods, health, and safety.

By creating sustainable and profitable renewable energy businesses, women can generate income, support their families, and contribute to their communities.



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Boosting women's livelihoods in Sierra Leone

The \$2.5m Solar Harnessed Entrepreneurs (SHE) pilot project, implemented by CARE Sierra Leone and supported by GEAPP, targets more than 6,000 women in nine of Sierra Leone's 16 districts, with the aim of helping expand their livelihoods through the use of renewable energy resources. CARE partners with microfinancing institutions to give businesswomen low-interest loans for solar-powered appliances such as freezers or cassava mills. The women receive training in financial literacy and business management, as well as enhanced market access to help their businesses grow. CARE also engages in 'household dialogues' with male family members to explain how the family and the larger community will benefit. With the average 25% increase in their incomes that the women have reported, many are using the extra funds to support their children's education. The SHE project ensures the green energy transition not only empowers women as entrepreneurs but makes a material improvement to their livelihoods.



We not only introduce new workers to the fresh jobs and industries being created across green energy value chains, for example, the construction, installation and maintenance of DRE and BESS, but help reskill and retrain workers from traditional energy industries to improve the quality and longevity of their jobs.



Focus on expanding energy access to help support labor intensive sectors and activities, for example, electrifying agriculture, introducing green energy sources to small or medium sized manufacturing or services, and electrifying daily domestic tasks such as cooking.

These efforts are underpinned by our flexible capital, designed to stimulate enterprise development and entrepreneurship. For example, the 2023 inaugural ENTICE program in India, which opened up venture funding to young entrepreneurs seeking to solve systemic energy issues. This program will be rolled out next in Vietnam and South Africa.



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Reskilling traditional workers helps bring JET-P to life in Komati

The JET-Ps are climate financing interventions designed to accelerate the move to clean energy in a way that benefits as broad a sweep of society as possible. As part of GEAPP's mission to accelerate equitable energy transitions, we have established strong relationships and programs in three Just Energy Transition Partnership (JET-P) markets: South Africa, Indonesia and Vietnam. Three countries with good energy access but with electricity systems which run on coal. South Africa was the first country to be supported by GEAPP with its JET-P implementation. It is emerging as a lab where GEAPP is able to test how it can best support job creation and the reskilling of displaced communities. For example in Mpumalanga (Komati), east of Johannesburg, where a coal plant operating since 1961 was closed in 2022, GEAPP is funding the set-up of a facility to retrain coal workers with the expertise needed to run the new renewable energy plant being co-located there. This is highly localized community work, which can be replicated in other parts of affected South Africa, achieving national reach. It will secure new jobs and economic growth for communities which could otherwise be left behind by the green energy transition.

Monitoring, Evaluation and Learning systems shape our work

Best-in-class monitoring, robust evaluation, and learning sits at the heart of GEAPP's approach and governs the way we make decisions.

We hold ourselves accountable to concrete outcomes and hypotheses and build learning into the system for ourselves and our partners.

Working in this context demands a robust approach to risk management and a clear-sighted openness to learning, not only when things work but with inevitable missteps along the way. This willingness to challenge is built into our mindset; it ensures our approach is informed by tangible results and realities.

OUR THREE PRIORITIZATION CRITERIA ARE:

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DREAMing big in Ethiopia

57 million Ethiopians, out of a total population of 112 million, lack access to electricity. Agriculture is the backbone of the economy representing 32% of GDP and 70% of the labour market. GEAPP launched its DREAM (Distributed Renewable Energy Modalities) project in October 2022 in partnership with the Government of Ethiopia, the Agricultural Transformation Institute, World Bank, EIB and ADB. DREAM will establish 200 mini grids, provide electricity to over 290,000 people in remote areas, create or improve 60,000 jobs, and displace up to 200,000 tons of greenhouse gas emissions by 2030. When completed, it will be the largest mini grid powered irrigation system on the continent. GEAPP provided 100% of grant funding for the irrigation work and half the grant funding to the energy side to de-risk the project.



01

Opportunity for impact

Analytical, based on the total addressable market.

02

Need for new intervention

How far are current trends putting us on-track.



03

Additionality of our work

Where can GEAPP add unique value.

Join our movement and let's change energy

The window in time to deploy and scale access to clean energy while mitigating climate change is closing.



We have a strong foundation

Our first two years give us cause for cautious optimism. We know we can drive systemic shifts and are realistic about the road that lies ahead. GEAPP's partnership led model is gathering momentum as we convert capital to coordination, implementation and impact.



We welcome your vision and voice

The green energy transition can only be achieved through a common vision and radical collaboration to raise awareness, end fragmentation and rebuild the system; a movement unified around an understanding that green energy access unlocks development and empowers lives and livelihoods.



We need your expertise and partnership

To ensure we properly respond to the urgency and quantum of the opportunity that lies ahead, we are constantly deepening and expanding our global movement. We welcome challengers and changemakers; those dissatisfied with the status quo, eager to make a meaningful difference, at pace.

The future is closer than you think

A future powered by renewable energy isn't something distant and unreachable, it's already here. Share your stories at [#LetsChangeEnergy](https://twitter.com/LetsChangeEnergy).



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