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Federal Department of Foreign Affairs FDFA
Swiss Agency for Development and Cooperation SDC
Global Programme Climate Change and Environment

CALL FOR PROPOSALS

«African Energy Storage Challenge»

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Abbreviations

CCAC	Climate and Clean Air Coalition
EnDev	Energising Development
GCC	General conditions for contracts concerning federal contributions for projects
GPCCE	Global Programme Climate Change and the Environment
HICs	High-Impact Countries
IEA	International Energy Agency
IRENA	International Renewable Energy Agency
LDCs	Least Developed Countries
LMICs	Low- and Middle Income Countries
NDC	Nationally Determined Contribution
NGOs	Non-Governmental Organisations
PV	Photovoltaics
R&D	Research and Development
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SEforAll	Sustainable Energy for All
SFOE	Swiss Federal Office of Energy

1 Background and Introduction

Access to clean, reliable and affordable energy is a key requirement to reduce poverty and to foster economic development and as such one of the 17 Sustainable Development Goals (SDGs). Today, 850 million people (around 13% of global population, and half of the Sub-Saharan Africans) still lack access to electricity, relying on biomass and fossil fuels for lighting, cooking, and heating - energy sources that lead to indoor air pollution and global warming. While taking toll on health and climate, this also results in children and women spending a substantial part of their day collecting firewood, limiting opportunities to pursue education or develop entrepreneurial activity to contribute to household income.

Renewable energy is an important solution to address these challenges. While renewables always had the climate benefit of reduced greenhouse gas emissions, their economic viability has also improved a lot over the past decade, due to rapidly decreasing costs. Especially in scarcely populated rural areas in Africa, where solar radiation is high and costs for grid infrastructure per capita would be disproportionately high, solar PV can deliver energy access at competitive prices nowadays. It is predicted that wind and solar will make up almost 40% of world electricity supply in 2040¹.

Even though the prize of renewable energy has strongly decreased, the storage of renewables is a key barrier for their adoption in many developing countries. An increased reliance on renewable energy sources poses new challenges to the existing power supply systems. While conventional large power plants have a rather continuous production throughout the year, renewables show larger fluctuations, depending on seasons, weather and daylight. This raises a growing need to store energy, in order to provide flexibility between the time of production and use of energy.

As a result, the value of storage continues to increase. Until 2030, the International Renewable Energy Agency (IRENA) projects that battery storage capacity could grow by 17-fold, partly also driven by costs of battery storage that could fall by up to 66%. When promoting energy access, it is therefore important to also consider storage aspects and their environmental implications, particularly looking at the projected growth of population, greenhouse gas emissions and energy demand in developing and emerging countries.

Energy storage solutions are particularly needed in Africa, where both population growth and the share of people without access to clean, reliable and affordable energy are highest. To date, Africa is the continent with the richest solar energy potential in the world. However, only 5 gigawatts of solar PV have yet been installed, less than 1% of the global total. It is now a crucial moment to promote durable storage solutions along with renewable energy to leapfrog the use of conventional power sources like coal and gas.

The International Energy Agency (IEA) identifies two current challenges in energy storage²:

- First, techno-economic improvements are needed in order to reduce investment costs, increase lifetime, efficiency and safety of existing solutions. The business-as-usual scenario comprises expensive diesel gensets or batteries as a backup solution, resulting in high costs and heavily polluting the environment. The majority who cannot afford these technologies is left behind with few hours of low-voltage electricity, struggling to move up the energy ladder and increase their income. And those who can afford these technologies contribute to environmental degradation, thereby adding to the burden of the most vulnerable groups who are struck the hardest by air, land and water pollution.
- Second, economic-regulatory hurdles need to be addressed. While countries are increasingly pushing the development of renewables, most policies miss out on an appropriate consideration of storage solutions. Policies, action plans and incentives are needed for a long-term sustainable national energy strategy that ensures clean, affordable and efficient access to energy for all.

¹ IEA (2019), World Energy Outlook 2019, IEA, Paris

² IEA (2018), Energy Storage TCP (ECES-Energy Storage through Energy Conservation) Report 2018

The Swiss Agency for Development and Cooperation (SDC), through its Global Programme Climate Change and Environment (GPCCE), aims to tackle these challenges simultaneously by launching the «African Energy Storage Challenge». Through the current call for proposals, the SDC is looking for innovative proposals on how to foster solutions and policies for the storage of renewable energy in rural Africa. Applicants are invited to submit a proposal with the description of the project idea. Among the received proposals, the SDC might chose up to a maximum of 3 proposals that will be awarded a project contribution (November 2020 - March 2021) to define a detailed intervention strategy for a four-year Implementation Phase (Summer 2021 - Summer 2025). Subject to the SDC's approval of the project documentation and the corresponding budget, the SDC will make a project contribution. At the end of the first Implementation Phase, the SDC will decide on contributing to a potential second phase (Summer 2025 - Summer 2029), depending on the evolution of the context and informed by an evaluation of the project results.

2 Guiding principles

2.1 Objective

The “African Energy Storage Challenge” aims at **enhancing peoples’ access to clean energy by fostering solutions and policies for the decentralized storage of renewable energy** in Africa through innovative approaches, knowhow transfer, pilot demonstrations and policy influencing, while building on Swiss expertise. More resilient and reliable clean energy access marks a cornerstone for sustainable development and offers strong co-benefits in terms of job creation, gender equality, food security and health.

The SDC is looking for project proposals that contribute to the achievement of the overall goal, proposing modalities and an approach that is structured around three components: (i) raising storage of renewable energy to the national policy agendas and strengthening the relevant policies, (ii) demonstrating environmentally friendly decentralized storage solutions and (iii) strengthening capacities for planning and implementation. The proposals should outline a consistent and comprehensive approach to address all three components above in a conducive and well-balanced manner.

2.2 Strategic linkages

The intervention shall help to enhance the use of renewables and avoid the development and use of conventional energy sources like oil, gas and coal which are highly polluting, in line with Switzerland’s current and future dispatch on international cooperation that comprises climate change as a priority theme. The planned intervention shall also be well aligned with the 2017-2020 Strategic Framework of the Global Programme Climate Change and Environment (GPCCE)³, in particular component 2 (low-emission development). Innovative storage solutions will stabilize power supply and hence contribute to more resilient communities (component 3). The intervention will also have to be aligned with the GPCCE’s 2021-2024 Strategic Framework, which is currently under preparation.

Promoting the adaptation of innovative energy storage solutions will contribute to numerous Sustainable Development Goals (SDGs), most prominently to SDG 13 (climate action) and SDG 7 (affordable and clean energy). By providing a more secure and sustainable supply of energy, it would also contribute to SDG 8 (decent work and economic growth), SDG 1 (end poverty), and SDG 5 (gender equality).

Throughout the intervention, GPCCE aims to leverage experience and knowledge generated to a larger scale using its existing platforms and networks such as the International Energy Agency’s Energy Efficiency in Emerging Economies Programme (E4), the Climate and Clean Air Coalition (CCAC), Sustainable Energy for All (SEforAll) or Energising Development (EnDev). GPCCE aims to link the project applicants to its respective contacts in order to exchange on project learnings, e.g. with the REPIC platform, where two project idea notes on salt batteries in Africa have been approved recently.

2.3 Geographic focus

The project focus is on Africa. The direct beneficiaries of this contribution would be people and institutions in the developing and emerging countries in Africa who ideally are part of the High-Impact countries (HICs)⁴, as defined in the Global Tracking Framework by the IEA and the World Bank. The project shall be relevant at local level and have a clear link to policy frameworks at national, regional and global levels.

³ see https://www.eda.admin.ch/dam/deza/en/documents/themen/klimawandel/broschuere-climate-change-2017_EN.pdf

⁴ High-Impact Countries (HICs) are the countries with the highest absolute gaps in access to electricity and/or clean fuels and technologies for cooking. Together, HICs are home to nearly 80 percent of those living without access to sustainable energy. For electricity access, the countries are: Afghanistan, Angola, Bangladesh, Burkina Faso, Congo (DR), Ethiopia, India, Kenya, Korea (DPR), Madagascar, Malawi, Mozambique, Myanmar, Niger, Nigeria, Philippines, Sudan, Tanzania, Uganda, and Yemen. 13 out of these 20 countries are in Africa.

3 Application details

3.1 Who can apply

The SDC is looking for proposals of organizations with the necessary expertise, capacity, network and experience and a strong track record in the field of energy storage. They are also required to have a demonstrated and recent track record of managing projects of similar volume and complexity. While the setup and the approach is to be proposed by the participants to the call for proposals, project is expected to involve the following types of stakeholders:

- At the **local level**, involved partners should be capable to ensure the successful implementation of demonstration of viable and sustainable decentralized energy storage solutions. This would typically involve public, semi-private or private utilities, local NGOs, local research organisations or cooperatives. Onboarding of local partners will be crucial for long-term success of the intervention. The partners will have to make sure that the process is inclusive, in particularly catering for the needs of marginalized and vulnerable groups.
- At the **national level**, the relevant government bodies in HICs need to be involved for capacity building and policy influencing. Recognized national and international experts can provide trainings and capacity building to formulate and implement energy storage policies to national institutions and, to a certain extent, at a more practical/technical level as well to the local level. A special preference should be given to the high participation of women in this typically male dominated sector.
- At the **regional level**, knowledge exchange between the countries should be ensured. This will involve the sharing of lessons learnt through global and regional platforms and initiatives. This could be ensured by regional initiatives participating in the consortia and potential strategic partnerships in complementarity to the proposals selected through the call of proposals and already supported initiatives.
- To build on **Swiss expertise**, applicant organizations would typically include experts affiliated with Swiss companies and research organisations for knowledge transfer, capacity building and policy influencing.

Public/private partnerships and cooperation among multi-stakeholders are highly welcome. Exclusive research projects will not be considered.

Synergies and complementarities to existing SDC financed programmes are welcome.

Contributions to projects and initiatives together with other donors and/or contributions to ongoing projects are eligible and should underline the SDC's added value.

Proposals by consortia of complementary organisations are strongly encouraged. In case of a multi beneficiary contribution (consortium), a lead organization is to be appointed who acts as the coordinator of the consortium and will be submitting the joint proposal to the SDC. The lead applicant will be the intermediary for all communication between the co-beneficiaries and the SDC and responsible for supplying all documents and information to the SDC. The lead partner will also be responsible to assure that deadlines and quality standards are met.

3.2 Duration and phases

The estimated period of financial support is 8 years and eight months from November 2020 until June 2029, with an inception phase and two main phases of four years.

During the inception phase (01.11.2020-31.03.2021), the applicant will further design the project and establish the detailed intervention strategy in line with the project objectives and outcomes, to set-up the organizational structure for the project team, identify demonstration sites, and prepare a detailed budget for the project. This will be done in consultation with all the concerned stakeholders at local, national, regional and global levels. Any further support by the SDC will be subject to the SDC's approval of the detailed project documentation including the budget.

During Phase 1 (01.07.2021-30.06.2025) the applicant will implement the activities defined intervention strategy while regularly reporting progress to the SDC. Any alterations of the activities and/or the budget are subject to discussion with the SDC or they might have implications on the SDC's financial support. Towards the end of Phase 1, the project results will be evaluated and the SDC will decide on the support of a potential Phase 2.

The Phase 2 (01.07.2025 – 30.06.2029) should aim to scale up and replicate the results generated during Phase 1 as well to support the financing and implementation of eventually developed energy storage policies. It should also include a longer term financing strategy, in order to sustain project achievements beyond the SDC's support.

3.3 Funding

In the framework of this call, the SDC might choose up to three proposals for funding. For the inception phase, the SDC's total contribution will indicatively range between CHF 50,000 and CHF 150,000 per proposal with a total maximum of CHF 300,000 for the overall Inception Phase. For Phase 1, the SDC's annual contribution will indicatively range between CHF 0.5 million and CHF 1.5 million per year and proposal, with a total maximum of CHF 1.75 million per year. The annual contribution will decrease in Phase 2.

SDC's contribution will cover a maximum of 50% of the total cost of the project in each Phase (Inception, Phase 1 and Phase 2). The presented budget shall include the full cost of the project and show all cost and all sources of finance. A considerable amount of co-funding expected from a credible source. If in-kind contributions are included as a source of finance, their amount shall be reproducible, documented, and the share is expected to decrease over the course of the project. In any case, the SDC reserves the right to make the final determination of eligibility and value regarding cash and in-kind contributions, to disallow expenditures and, if necessary, to reduce the amount of SDC funding awarded.

There is no remuneration for the submission of proposals.

3.4 Contractual aspects

The Subsidy Act and the conditions of the Federal Department of Foreign Affairs regarding contributions are applicable.

By submitting a proposal, the applicant accepts the applicable standard contracts (i.e. for applicants based in Switzerland: Federal contribution for project incl. General conditions for contracts concerning federal contributions for projects (GCC), see Annex 1; for applicants based outside Switzerland: Contribution outside Switzerland).

4 Submission procedure

4.1 Contact and information

All information about this call for proposals is publicly available on SDC's Climate Change and Environment Network website: <https://www.shareweb.ch/site/Climate-Change-and-Environment/network-services/Pages/Call-for-Proposals.aspx>

Questions related to the call for proposals can be submitted until 03.07.2020 by email to gpcce@eda.admin.ch. The title of this Call for Proposals (African Energy Storage Challenge) must be mentioned in the subject line. All questions and the answers will be anonymously and openly available on the Climate Change and Environment Network website by 15.07.2020.

The proposals have to be submitted by 20.08.2020 23:59 CEST latest to gpcce@eda.admin.ch. A confirmation of receipt will be sent via email within 24 hours.

For a successful submission, the proposal must fulfil the following criteria:

- The proposal is submitted in English.
- The proposal contains all documents indicated in Chapter 4.2.
- The proposal respects the page limits indicated in Chapter 4.2.
- Validity of proposals: 180 days after deadline for submission of proposals
- The proposal must be submitted by email (deadline 20.08.2020 23:59 CEST).
- The title of this Call for Proposals (African Energy Storage Challenge) must be mentioned in the subject line.

Proposals that do not meet all the criteria above will not be considered.

4.2 Documents to be submitted

The proposal has to be submitted by email as one consolidated pdf file. The proposal has to include the following documents:

- Cover letter with signatures (max. 1 page)
- Technical proposal (max. 6 pages)
 - description of approach, proposed strategy of intervention, impact hypothesis or theory of change and sustainability of the project
 - expected results to be achieved within 4 years, and if applicable of the results achieved so far
 - description of direct and indirect partners and beneficiaries
 - assessment indicating opportunities and risks and the means identified for addressing them
 - composition of the consortium and organizational structure, including key project staff
 - description of institutional profile(s) and experience in the thematic fields of the project proposal
- Financial proposal (max. 4 pages):
 - Budget summary (max. 1 page) for the overall project, including confirmation of co-financing and share of co-financing
 - Budget for Inception Phase, Main Phase 1, and Main Phase 2 (max. 3 pages in total):

- For each Phase, the budget shall specify personnel, material, travelling and other costs and allocation to various lines of action, not exceeding the maximum budget indicated in Chapter 3.3.
- For each Phase, the budget shall include the full cost of the project and show all cost and all sources of finance. It shall clearly specify, which sources are in-kind contributions and which are monetary contributions.

Additional annexes or links to further documents are not allowed.

4.3 Timetable

This is the planned schedule at the time of the publication of call for proposals. The issuing authority reserves the right to make amendments.

Date / Deadline	Activity
22.06.2020	Call for proposals opening
03.07.2020	Deadline for submission of questions
15.07.2020	Publication of answers to questions on CC&E shareweb
20.08.2020	Deadline for submission of complete proposals
August 2020 - September 2020	Evaluation of submitted proposals
September 2020	Oral presentations and negotiations (remain reserved)
October 2020	Evaluation decision
October 2020	Communication on decision to all applicants
01.11.2020	Start of Inception Phase
November 2020 - March 2021	Development of a detailed intervention strategy by applicant
June 2021	Signing of Contract between SDC and applicant organisation, subject to approval by SDC
01.07.2021	Start of Phase 1

5 Selection of projects; evaluation criteria

5.1 Eligibility check

An evaluation committee set up by the SDC, will check whether the proposals meet the formal criteria as described in the chapters 4.1 and 4.2. Proposals that do not meet the formal criteria will not be evaluated. The committee will then evaluate all the eligible proposals according to the criteria described in the chapter 5.2.

5.2 Evaluation

For the selection of project proposal(s), the following will be of importance:

1. the comprehensiveness and consistency of the chosen modalities and approaches towards the three components (policy, demonstration and capacity building);
2. how possible trade-offs (ecological, social, economic) are addressed and positive externalities (in particular improved energy access, but also circular economy/lifecycle approaches) are strengthened while negative impacts (in particular environmental degradation and pollution) are avoided or at least minimized;
3. the scalability and sustainability of the proposed modalities and technologies in response to poverty reduction (end-of-project vision, e.g. by introducing tested, low-cost concepts and solutions with a viable business model);
4. the extent to which the approach builds on Swiss experience (in either the technologies or the modalities applied, preferably both);
5. the competence, experience and complementarity of the applicants as consortia in order ensure effective and efficient implementation of the chosen modalities and approaches towards the three components (policy, demonstration and capacity building);
6. the extent to which the consortium is embedded in the local context, ensuring that the approach responds well to local needs and constraints;
7. the capability of the consortium to reach out to a wider network of existing initiatives led by different stakeholder groups, including research institutions, private sector, local service providers, public authorities, development banks, local communities and NGOs;
8. the way how gender equality and women's empowerment are fostered and the needs of vulnerable groups are addressed;
9. the evaluation of the financial proposal in terms of clarity and consistency, cost/benefit ratio and the share of co-financing and in-kind contributions.

Proposals will be reviewed according to international peer review standard procedures. The following table provides an overview of the evaluated criteria and the corresponding weighting:

C	Criteria	Weighting
	Technical Proposal	
C1	<i>Qualification, experience and network of the applicant</i> Demonstrated thematic expertise, qualification, capacity, achieved results and institutional network	30%
C2	<i>Proposed approach</i> General approach, relevance in relation to the points 1-9 mentioned in above in Chapter 5.2 and probability of success	40%

	Financial Proposal	
<i>C3</i>	<i>Clarity and coherence of the proposition</i> The proposal provides a complete cost structure and allocates costs to various lines of action. The financial proposal is coherent with the technical proposal.	10%
<i>C4</i>	<i>Cost-benefit ratio</i> Relation of estimated costs to expected outcomes	10%
<i>C5</i>	<i>Share of co-financing</i> Reliable source of co-financing and % of co-financing	10%

Each criterion (C) will be evaluated according to the following score table:

Score	Fulfilment and quality of the criteria	
0	Cannot be established	<ul style="list-style-type: none"> Information has no significance
1	Very bad fulfilment	<ul style="list-style-type: none"> Information is insufficient. Data quality is very poor.
2	Bad fulfilment	<ul style="list-style-type: none"> Information relates inadequately to the requirements. Data quality is poor.
3	Average fulfilment	<ul style="list-style-type: none"> Information globally responds inadequately to the requirements. Data quality is adequate.
4	Good fulfilment	<ul style="list-style-type: none"> Information focuses well on requirements Data quality is good.
5	Very good fulfilment	<ul style="list-style-type: none"> Information clearly relates to the achievement of outputs Data quality is excellent.

5.3 Oral presentation and negotiation (remain reserved)

In case of high quality proposals with similar scoring, the SDC reserves the right to invite the concerned applicants (maximum of 5 proposals) for an oral presentation (phone or video conference) to a selection committee of the SDC. The oral presentation will tentatively take place in September 2020.

5.4 Evaluation decision

Following the evaluation procedure and criteria described in chapter 5, the evaluation committee will take a final decision. SDC reserves the right not to select any proposal. The evaluation results will be communicated to the applicants as soon as the final decision is taken (expected in October 2020).

6 Further conditions for the submission of a proposal

6.1 Contractual aspects

The applicant agrees with the following:

a) Project progress reporting

Operational reporting: The contracted organizations are required to send operational progress reports to the SDC every 6 months and at the end of each phase on the overall project progress. These reports inform the SDC about the progress and milestones achieved during the reporting period. Specific outputs from the project should be included (e.g. publications). Nine months prior to completion of Phase 1 and Phase 2, contracted organisations will prepare an End of Phase Report that documents the results achieved against the planned objectives and the lessons learned from the current phase.

Financial reporting: The contracted organizations are required to send financial reports every 6 months and at the end of each phase, justifying the use of the funds.

The SDC has to be informed about any changes affecting the grantees (e.g. moves, changes to employment terms).

b) Payments

Payments are made in several instalments including a first advance payment at the signing of the contract and following payments after the reception and acceptance of progress and final reports.

c) Publication and application of results

Acknowledgement of support: whenever results generated by SDC funded project are published (for example in journals, patents, presentations, etc.) the applicants should bring attention to the financial support provided by the SDC. This may imply a written acknowledgment and/or visible SDC logos:

'The research leading to these results was funded by the Swiss Agency for Development and Cooperation'.

The SDC may publish information on projects, which it supports financially. This could include the name and affiliation of the applicants and host institution, the project's objectives and the amount of funding awarded.

7 Annexes

No.	Annex
1	General conditions for contracts concerning federal contributions for projects