



SECOND EDITION

DIGITAL ENERGY CHALLENGE

CALL FOR PROJECTS 2022

Boosting digital innovation in the energy sector,
by supporting start-ups and power utilities
in Africa

Photo © Roland Zanré

DIGITAL ENERGY CHALLENGE

CALL FOR PROJECTS 2022

Digitalization is key to increase energy access, integrate renewable energy sources into the grid and improve the performance of power utilities, especially in developing countries. Public utilities, start-ups and technology providers can boost digitalization through partnerships and new business models.

To support the modernization of the energy sector, the Digital Energy Facility, a European Union financed programme managed by AFD, launched the Digital Energy Challenge in 2021 with an annual Call for Projects. The geographical focus for the 2022 Call for Projects is Africa due to the high needs on the continent.

One of the aims of the Digital Energy Facility is to gather private and public players in the energy and innovation sectors to facilitate partnerships to address these topics. The creation of an online Digital Energy community in 2022 and the Digital Energy Challenge and will support such synergies.

APPLICATION PERIOD

1st March to 30th April 2022



WHO CAN APPLY?

— **Start-ups** in seed or early-stage activities looking to scale up their digital innovations or digital transformation projects.

— **Public utilities in partnership with innovative technology/service providers**, looking to implement innovative digital projects.



PROJECT ELIGIBILITY CRITERIA

All projects must be:

— **DIGITAL** i.e. have telecom, computer or cloud-based technology as a central element of the project.

— **INNOVATIVE** either intrinsically or in relation to the local market/country.

— **LOCAL** with management activities in the African country where the project is based.

In addition, projects must address one of three themes specifically chosen for the 2022 edition.



BENEFITS FOR AWARD WINNERS

An annual budget of €2M will enable the 2022 awardees to benefit from financial and technical support.

— The financial contribution can be a maximum of €150K for a start-up and €500K for a public utility. This contribution includes grant-based funding and technical assistance to support project management.

— All winners are invited to participate in a bootcamp with multisectorial experts to support the implementation of their project.

In addition, winners can benefit from increased visibility through widespread communication campaigns driven by AFD.

HOW TO APPLY?

1. Choose the category Digital Energy Challenge for Start-ups or Digital Energy Challenge for Utilities.

2. Participate in the information webinar in English on 17th March 2022 at 3pm CET.

3. Complete the application form and prepare the required documents.

4. Submit your complete application online by 30th April 2022.

For more information or to be added to the Challenge mailing list please contact us on:

contact@afddigitalenergychallenge.com

ARE YOU A START-UP

LOOKING TO SCALE UP YOUR DIGITAL INNOVATION OR TRANSFORMATION PROJECT IN THE ENERGY SECTOR AFRICA?

Digital Energy
Challenge

FOR **START-UPS**

Does your project contribute to increasing energy access through mini-grids or improving grid management sustainably and with greater cost efficiency? After checking the eligibility criteria, download the application pack and apply online.

ELIGIBILITY CRITERIA FOR START-UPS

The start-up must:

- Be less than 10 years old.
- Be in the pre-seed/early-stage financing phase i.e less than €1M raised.
- Have an annual turnover of less than €1M.
- Employ between 1 and 99 people full-time.

BENEFITS FOR START-UP AWARD WINNERS

The winning start-ups will each benefit from:

- **Project funding** of up to €150K, which includes a grant to contribute to costs for equipment, software, training and recruitment. It also includes technical assistance awarded on a case-by-case basis, such as project management support, strategic/technical expertise and accounting or reporting assistance.
- A joint **boot camp** with public utilities winners and multisectorial experts to support project implementation and foster synergies between project winners.
- **Communication campaigns** driven by AFD during the selection, award and release of funds periods.

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HOW TO APPLY?

1. Download the Start-ups Application Pack.
2. Participate in the information webinar in English on 17th March 2022 at 3pm.
3. Complete the application form and prepare the required documents.
4. Submit your complete application online by 30th April 2022.

ARE YOU A PUBLIC POWER UTILITY

LOOKING TO IMPLEMENT A DIGITAL INNOVATION PROJECT?

Digital Energy
Challenge
FOR UTILITIES

Does your project contribute to increasing energy access through mini-grids or improving grid management sustainably and with greater cost efficiency? After checking the eligibility criteria, download the application pack and apply online.

ELIGIBILITY CRITERIA FOR UTILITIES

- The project owner must be an **African public power utility or organisation** (includes public Independent System Operators, power pools, regional organisations, energy regulators and rural electrification authorities).
- The innovative technology or service provider must be a national or international registered company, less than 15 years old, with more than 5 full-time employees and a turnover of less than €50M. In addition, the company must have developed an innovative solution to be tested within the Challenge and be in a business relationship with an African utility, supported by a signed (or near date for signature) memorandum of understanding.

BENEFITS FOR UTILITY AWARD WINNERS?

The winning utility partnerships will benefit from:

- **Project funding** of up to €500K in the form of a grant to support costs for equipment, software, products or services provided by the technology supplier and training; and **technical assistance** for project management support, strategic and technical expertise.
- A joint **boot camp** with start-up winners and multisectorial experts to support project implementation and foster synergies between project winners.
- **Communication campaigns** driven by AFD during the selection, award and release of funds periods.



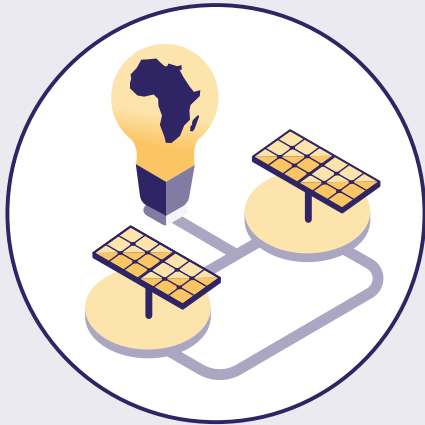
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HOW TO APPLY?

1. Download the Utilities Application Pack.
2. Participate in the information webinar in English on 17th March 2022 at 3pm.
3. Complete the application form and prepare the required documents.
4. Submit your complete application online by 30th April 2022.

THREE PROJECT THEMES FOR THE 2022 EDITION

1. UNIVERSAL ELECTRICITY ACCESS THROUGH MINI-GRIDS

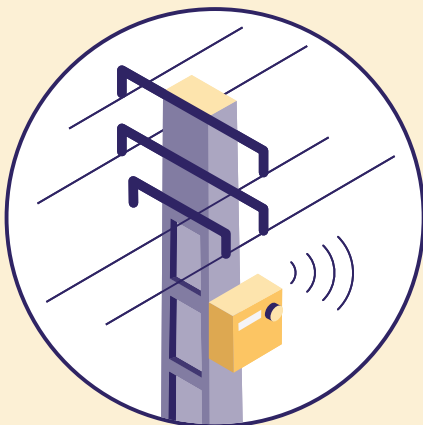


Digital innovations in the field of mini-grids to maximize their efficiency and impact:

- Energy management systems for the optimal use of clean and renewable energy.
- Storage systems and algorithms minimizing the use of fossil fuel generators.
- Tools to facilitate interconnections with the main grid and with other mini-grids.
- Systems and algorithms for building-up nanogrids.
- Geospatial data analytics for power demand evaluation and/or credit risk assessment.

2. EFFICIENT GRID MANAGEMENT

All ancillary services ensuring a proper operation of the power grid, with a focus on:



- Information availability and communication systems
 - Grid data sharing, IT/OT integration;
 - Grid mapping improvement (e.g. through satellite imagery, GIS database management and interfacing);
 - Adoption of cloud computing and IoT-enabled systems.
- Streamlining Business-As-Usual grid operational management practices
 - Optimisation of the assets' useful life through improved maintenance (digitized and remote maintenance):
 - Infrastructure inspection via drones and other new technologies;
 - Active monitoring of the assets' condition via smart sensors;
 - Data analytics to improve periodic and predictive maintenance.
 - Implementation of Dynamic Line Rating (optimising thermal limits according to weather conditions) and analysis of the grid's risk profile and resilience to extreme events;
 - Simulation tools for enhanced training and planning;
 - Management and supervision of grid interconnections;
 - Digitization of substations and feeders.

THREE PROJECT THEMES FOR THE 2022 EDITION

3. SUSTAINABLE AND COST-EFFECTIVE POWER SYSTEMS

Digital-based solutions enabling the development of a greener, more flexible and cost-effective power infrastructure (both generation units and grid):

— Additional renewables capacity

- Renewable power plant (including wind, solar, hydro, biogas) connection to the main grid;
- Renewable energy production maximization in hybridized systems;
- Renewable energy production forecast (leveraging on meteorological data) and monitoring to minimise curtailment and avoid grid outages;
- Other grid services needed for higher renewable energy penetration.

— Grid stability and flexibility

- Integration of ancillary resources and services;
- Grid balancing and capacity firming;
- Virtual power lines.

— Reduction of losses, increased power availability and service quality

- Reduction of technical losses and improved grid knowledge through grid data analysis;
- Reduction of non-technical losses through metering (big) data analysis;
- Improvement of power supply continuity (reduction of the number and duration of faults, load shedding minimisation);
- Enhanced customer relationship via service digitization.





WORDS FROM A CHALLENGE WINNER

Ousmane Fall Sarr, Director of Studies and Planning and Project Lead at the Agence Sénégalaise d'Électrification Rurale (ASER).

Project: Georeferencing and mapping method using AI for electrical distribution networks.

« The support of AFD enables us to finance the development of the pilot project and test it in rural and urban environments, which have very different network layouts. This backing adds credibility to the project, enabling us to work closely with all stakeholders, including the national utility, in the technical project tracking committee. »

NEXT STEPS

- **1st March 2022**
Call for Projects opens
- **17th March 2022 (3pm-4:30pm CET)**
[Information webinar](#) in English
- **30th April 2022 (23:59 CET)**
Deadline for receipt of applications.
All applications must be uploaded
via the respective [Start-ups](#)
or [Utilities](#) web pages.
- **Autumn 2022**
Notification of award winners
and bootcamp
- **End 2022**
Signature of contracts
and release of funds

ELIGIBLE COUNTRIES

The Digital Energy Challenge Call for Projects 2022 supports projects in the following countries:

Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo Democratic Republic, Congo Republic, Côte d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe.

CONTACT US

contact@afddigitalenergychallenge.com