Future of Energy Conference

2026

INNOVATION CHALLENGE

CONCEPT NOTE

1.0 Background and Rationale

At the centre of the global energy transition is innovation. The development and deployment of low-carbon technologies for electricity generation, battery storage and energy efficiency are reshaping global energy systems and industrialisation. It is also expanding across broader segments of the energy and industrial ecosystem to include circular economy and clean cooking technologies. These innovations are redefining how energy is produced, consumed, and integrated into economic systems.

Africa, however, faces a structural challenge. While the continent possesses abundant energy resources and significant industrial potential, it has not been a major driver of innovation in key low-carbon and energy-related technologies. Global innovation trends illustrate this disparity. For example, statistics from the International Renewable Energy Agency show that Africa accounted for less than 0.05% of patents related to battery storage technologies recorded between 2010 and 2024, with the majority of innovations occurring in Asia and North America.

The implications of this gap are significant. Solutions developed in other contexts are often not well suited to local conditions, limiting their effectiveness and scalability. At the same time, Africa increasingly functions as a market for imported technologies, capturing limited value in innovation, manufacturing, and intellectual property. Consequently, it forgoes opportunities for revenue generation and industrial deepening. This dynamic also constrains the continent's ability to shape the direction of the energy transition in ways that align with its own economic and development priorities. Cumulatively, these challenges risk reinforcing a pattern of technological dependence, ultimately limiting Africa's ability to fully benefit from the opportunities presented by the global energy transition.

Addressing this gap requires deliberate efforts to strengthen innovation ecosystems across low-carbon and broader energy-linked technologies. This includes building institutional capacity, supporting research and development, improving access to finance for early-stage innovators, and creating platforms that connect innovation with policy, industry, and investment. It also requires leveraging Africa's demographic advantage. With one of the youngest populations globally, the continent has significant potential to develop a new generation of innovators capable of driving context-specific, scalable solutions.

As an integral component of the Future of Energy Conference, **the Innovation Challenge** is positioned as a strategic intervention to catalyse low-carbon, resource-efficient, and inclusive energy solutions. The Challenge provides a platform that supports the development and visibility of locally grounded, practical, and scalable innovations to support Africa's low carbon development initiatives.

2.0 Objective

The Innovation Challenge aims to:

- Facilitate pathways for commercialisation, scale-up, and integration of innovations into policy and industry ecosystems
- Provide a platform for visibility, validation, and stakeholder engagement
- Contribute to strengthening Africa's energy innovation ecosystem

3.0 Structure

The 2026 Innovation Challenge will be delivered through two distinct but complementary tracks, each addressing different dimensions of Africa's energy innovation landscape.

Track 1: Pan-African Low Carbon Innovation Track

This track is designed to catalyse broad-based, practical, and disruptive low-carbon innovations relevant to African contexts. It aims to attract innovators working across power systems, end-use applications, circular economy solutions, and industrial energy challenges.

The focus areas under Track 1 include, but are not restricted to, the following:

- Sustainable energy access solutions
- Cost-reduction and efficiency innovations
- Clean cooking technologies
- Circular economy and resource efficiency
- Distributed and digital energy systems
- Industrial energy solutions

Track 2: Afro-Hackathon Track

The Afro-Hackathon Track is a specialised, technology-focused track dedicated to advancing lithium-ion battery innovation and value addition within Africa. The initiative leverages African institutions of higher learning, research ecosystems, and innovation hubs to drive battery technology development aligned with continental frameworks such as the Africa Mining Vision. The Afro-Hackathon Track is anchored by key partners including the African Minerals Development Centre (AMDC), the African Union Development Agency (AUDA-NEPAD), Africa Change Lab, and the United Nations Development Programme (UNDP).

The focus areas under the Afro-Hackathon Track include the following:

- Lithium-ion battery design and engineering

- Battery applications (mobility, storage, off-grid systems)
- Re-engineering and adaptation of existing technologies
- Battery value chain development
- Circularity and lifecycle management

4.0 Target Participants and Eligibility Criteria

The Challenge targets young African innovators. To be considered eligible for the Challenge, applicants must meet the following requirements:

a. Stage of Development

Submissions must fall within one of the following development categories:

- **Ideation with model/simulation:** For innovators who have clearly conceptualised their solution and can demonstrate its functionality through a model, simulation, or structured framework, but have not yet built a working prototype
- **Early-stage prototype:** For innovators who have developed an initial working version of their solution, but have not yet tested it with users or in a real-world environment
- **Pilot-tested concept:** For innovators who have tested their solution in a real-world setting or with target users and have generated initial feedback, but have not yet achieved full commercialisation or large-scale deployment

Please note that purely conceptual ideas without demonstration of feasibility will not be considered.

b. Originality and Relevance

Solutions should demonstrate original thinking or meaningful adaptation**.** Modifications to existing solutions must show clear improvements in cost, usability, or contextual relevance

c. Participation Requirements

Applicants must be nationals of an African country and must be between 15 and 35 years old. Participants may be based in Africa or in the diaspora, provided their innovations are relevant to African contexts. Team applications are allowed, however, only one representative per team will be supported to attend the final event in Accra.

5.0 Intellectual Property

All intellectual property rights remain fully with the innovators. The organisers do not claim ownership of submitted ideas or solutions, and participation does not affect applicants' ability to further develop, protect, or commercialise their innovations. All submissions will be treated with due confidentiality, with assessment focused solely on their relevance and applicability to the Challenge objectives.

6.0 Challenge Design and Selection Process

The Challenge is structured as a multi-stage process to ensure consistency, transparency, and rigor in evaluation.

a. Stage 1: Open Call and Application Review

The first stage is a public call for applications to all interested applicants. Applications shall be reviewed and scored by a panel of experts against clearly defined evaluation criteria. **Kindly note that due to the anticipated volume of applications, only shortlisted applicants will be contacted at this stage.**

b. Stage 2: Interviews and Validation

Shortlisted applications from Stage 1 shall undergo virtual interviews with an assessment panel. This stage will further evaluate the depth, feasibility, and practical relevance of submitted solutions.

c. Stage 3: Innovation Showcase Series

Shortlisted applicants from the interview stage will participate in the Innovation Showcase Series. This is a curated set of virtual sessions where innovators present their solutions to a jury and a broader audience. Finalists from this stage advance to the Final Pitch Event in Accra, Ghana.

d. Stage 4: Final Pitch Event (FEC 2026)

The Final Pitch Event will be held as part of the Future of Energy Conference on 25–26 August 2026 in Accra, Ghana. Finalists will present their innovations before an audience of over 1,000 in-person and virtual participants, including policymakers, industry actors, financiers, and potential partners. In addition to their presentations, finalists will be engaged in further assessment components aimed at evaluating the real-world applicability of their solutions and their capacity to navigate practical implementation scenarios and context-specific challenges.

7.0 Opportunities for Successful Applicants

Finalists and winners in the Innovation Challenge will gain access to a range of opportunities designed to support the development, visibility, and scaling of their solutions:

- Opportunity to pitch their innovations at the Future of Energy Conference (FEC) 2026
- Exposure to policymakers, industry leaders, investors, and potential strategic partners
- Cash prizes to support further research, development, and prototyping of their innovations
- Continued mentorship and incubation support under ACEP's Climate Innovation Hub

8.0 Implementation Timeline

- Call for Applications: April 24, 2026 – May 31, 2026
- Assessments & Shortlisting: June – July 2026
- Final Pitch Event: August 25 – 26, 2026

For additional information, kindly send an email to fec2026@acep.africa