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PRIZE

The Milken-Motsepe Prize in Green Energy

Competition Rules

The Milken-Motsepe Innovation Prize program is a series of technology prize competitions that address some of the world's most pressing challenges, such as access to food, energy, housing, and education. The Milken-Motsepe Prize in Green Energy is designed to develop green energy innovations at scale, in order to expand access to reliable, affordable, and sustainable electricity in Africa. The competition offers $2 million in total prizes, including a $1 million grand prize for the winning team and an additional $1 million distributed throughout the competition. Participating semi-finalist and finalist teams will also receive access to networking, training, and other resources. Registration is free and open to everyone around the world.

These competition rules contain the specifications, requirements, and timeline of the Milken-Motsepe Prize in Green Energy. The competition rules may be revised by the competition judges at any time in consultation with the Milken Institute and the Motsepe Foundation. All active teams will be provided with additional information as needed during the competition and will be notified immediately of any changes.

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1. The Purpose

The primary aim of the Milken-Motsepe Prize in Green Energy is to expand access to reliable, affordable, and sustainable electricity in Africa as an essential input to long-term economic growth and shared prosperity.

Access to electricity is an urgent problem for the continent. Over 600 million Africans lack access to electricity at home. In some countries, as few as 10 percent of the population have access to electricity. Even those with access often find the energy supply unreliable and costly. Over 70 percent of African businesses experience regular electrical outages—the highest percentage for any world region—and African firms report that, on average, about 30 percent of their electricity comes from generators. This widespread energy poverty has severe health impacts and drastically restricts economic activity and growth.

While African countries have contributed almost none of the world's cumulative greenhouse gas emissions, there is a growing consensus that Africa can become a global leader in the green energy transformation, as part of a broader energy strategy to power economic development on the continent. At present, however, only 9 percent of Africa's energy supply comes from renewable sources. Additionally, through catalyzing the development of new sources of reliable and sustainable electricity, the Milken-Motsepe Prize in Green Energy can help advance progress across the full range of United Nations Sustainable Development Goals (UN SDGs), by helping expand access to quality education and safe housing in off-grid locations, for example, and by powering agricultural innovations that can expand food security.

For these reasons, the Milken-Motsepe Prize in Green Energy will challenge innovators to design **distributed energy resources (DER) that enable wider access to electricity from green sources** in African countries. These innovations should directly advance UN SDG No. 7: ensuring "access to affordable, reliable, sustainable and modern energy for all."

What are distributed energy resources (DER)?

The term "distributed energy resources" (DER) refers to any number of modular power generation technologies designed for off-grid locations or as a supplemental or more affordable power supply for grid-connected homes or business facilities. Examples of green DER solutions include, but are not necessarily limited to, solar photovoltaic power generation, wind power units, and battery storage charged from green sources.

2. The Approach

The open, global structure of the Milken-Motsepe Prize in Green Energy encourages unconventional innovators and local and non-traditional voices to participate, alongside established industry veterans and experts. In addition to funding the most viable ideas, the prize competition also aims to strengthen the broader entrepreneurship and innovation ecosystem in green energy in Africa. Teams across a wide range of geographies and disciplines will receive free training resources, mentoring, and networking opportunities to improve their chances of competing successfully, both within the competition and beyond. Teams selected as semi-finalists and finalists will also receive prize funding to support them as they execute real-world demonstrations of their solutions.

3. The Challenge

Winning teams will demonstrate the ability to deploy distributed green energy solutions at scale in Africa, with the goal of dramatically expanding access to reliable electricity. Teams should make use of new technologies or should adapt existing technologies in innovative ways to generate at least 60 kWh of off-grid electricity daily (24 hours) using green energy sources.

4. Eligibility and Team Registration

4.a. Eligibility and Exceptions

Registration is free and open to everyone from around the world, with very narrow exceptions as defined below. Participants can be a single individual or a team of individuals, including formally incorporated businesses. Young people, including minors, are welcome and encouraged to participate. However, all participating individuals under the legal age of majority in their primary residence must have an adult of legal age sign legal documents on their behalf.

The following individuals or teams are not eligible to participate:

- Any individual or entity organized or with primary residence in an embargoed country[1]

[1] See https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information for details.

- Any individual or entity listed on OFAC's Specially Designated Nationals and Blocked Persons List or other sanctions list administered by OFAC[2]
- Any current or recent employee or immediate family member of an employee of the Milken Institute or the Motsepe Foundation

4.b. Team Registration

The team registration period begins when the prize is announced and ends at the deadline for Design Round submissions (see the timeline in section 5 below). Teams may register at any time during that period.

Teams must be registered by designated team leaders. Team leaders will be responsible for maintaining rosters of all team members and for their ongoing compliance with competition rules and the Competitor Agreement teams will sign when submitting proposals. A team leader must also designate a prize recipient, which is the person or organization to which prizes will be awarded (prizes will be awarded to one recipient only). Team leaders must submit in writing any substantial changes they propose to make to their team leadership or prize designation at any time during the competition.

5. Competition Overview

5.a. Competition Structure

The competition consists of three rounds.

1. During the **Design Round**, registrants from around the world may submit design proposals via the prize's online submission portal. Teams' submissions must include designs for systems innovations that accelerate adoption of green energy solutions in Africa.

2. At the close of the Design Round, competition judges will select 20 teams to continue to a **Semi-Finalist Round**. These 20 teams will receive $20,000 each and will then have four months to implement a real-world demonstration (use case), with no geographical requirement, and write a case study on their innovation's performance. Teams based outside of Africa will also need to articulate their potential to execute a demonstration

[2] See https://home.treasury.gov/policy-issues/financial-sanctions/specially-designated-nationals-and-blocked-persons-list-sdn-human-readable-lists for details.

of their innovation in Africa if they proceed to the Finalist Round.

3. Based on the use case design and execution as well as the case study document, judges will select 5 teams to advance to the **Finalist Round**. These Finalists will receive $70,000 each and will then have to execute a second real-world demonstration, which must occur in Africa, and to prepare their final submission package for judges. At the end of the competition, one grand prize will be awarded. Throughout the competition, teams will be provided with ongoing mentoring, resources, and networking/pitching opportunities.

5.b. Competition Timeline

Date	Activity	Description
November 18, 2022	Team Registration Begins	Teams can register for the competition.
March 1, 2023	Submission Window Opens	Teams can submit their design proposals
March 29, 2023	Design Round Submissions Deadline	Teams submit their designs for judging by 6 pm UTC, March 29, 2023.
June 2023	Design Round Awards	Design Round Awards are announced, no later than June 6, 2023. Twenty (20) teams proceed to the Semi-Finalist Round.
September 28, 2023	Semi-Finalist Round Submissions	Teams submit their use case designs and case studies by 6 pm UTC, September 28, 2023.
October 2023	Semi-Finalist Awards	No later than October 27, 2023, the judges select five (5) teams to advance and become Milken-Motsepe Prize Finalists.
March 2024	Finalist Submissions	Finalists will submit final submissions packages for judging in March 2024, with the precise

		date to be communicated based on field demonstration timeline.
April/May 2024	Awards Announcement	The grand prize winner and runner-up are announced.

5.c. Judging

A group of independent global experts from relevant industries and with knowledge of Africa and relevant market conditions will judge the submissions. The judges will be independent of the teams, the Motsepe Foundation, and the Milken Institute. In addition, they will have no conflicts of interest with any of those parties.

Their judgments will be final and without appeal by entrants, the Milken Institute, or the Motsepe Foundation. In addition, in consultation with the prize organizers and advisory board, the judges have authority to change the number of teams advancing to subsequent rounds as well as the amount of any prize.

The judges or their representatives may observe any test or demonstration performed in the competition, in person or remotely. Visits to demonstrations sites may occur without prior warning, but will generally be scheduled in coordination with team leaders.

5.e. Intellectual Property Rights

The judges will keep team submissions confidential. Prize winners in each round, however, will be expected to demonstrate and describe their designs in public.

Teams will retain complete ownership of all intellectual property developed for the competition.

6. Design Round Submissions and Prizes

6.a. Design Round Submissions

The Design Round submittal is a detailed description of a team's design and business model. It must include:

- ***Design document:*** a single PDF document of at least 2 pages, and no more than 25 pages that show how teams will achieve significant levels of green power generation (with a minimum of 1-inch margins and an 11-point font). Among other details, the design document 1) should identify the specific geographic area or areas in Africa where the solution can be deployed and 2) should propose an innovative DER solution that can deliver at least 60 kWh of off-grid electricity daily (24 hours) using green energy sources.
- ***Business model document:*** a single PDF document of at least 2 pages, and no more than 25 pages, that provides a business model and/or deployment strategy for the team's innovation
- ***Demo preparations plan:*** a single PDF document of no more than 5 pages that outlines the approach the team will take to the real-world demo if they advance to the Semi-Finalist Round
- ***Video:*** a 3-minute video presentation or demonstration of the team's design, in MP4 format (videos that are any longer than 3 minutes and 59 seconds will disqualify teams)
- ***Competitor Agreement:*** the team's agreement to abide by the terms of the competition, which will be made available via the online submission portal

It may optionally include:

- ***Design workbook:*** a Microsoft Excel workbook supporting the design document
- ***Business model workbook:*** a Microsoft Excel workbook supporting the business model document

All mandatory and optional documents must be in English. Videos must either be in English or contain English subtitles. Links to Google Docs, Google Sheets, or other online materials are not acceptable.

Teams may submit materials anytime between March 1, 2023, and March 29, 2023 (6 pm UTC). Submissions that do not contain all required materials or do not comply with minimum/maximum page lengths will be disqualified. Submittals after 6 pm UTC on March 29, 2023, will be automatically disqualified.

6.b. Design Round Judging

Teams will be judged on their innovation's alignment with the purpose and challenge statements above, as well as with the teams' perceived ability to implement their innovation based on the documents submitted. Judges may also consider additional aspects of the team's submission, such as climate resiliency, maintenance and repair demands, social impact, and potential for adoption by local communities. Judges will disqualify teams whose innovations do not promote green energy or whose approach would cause harm to the environment, individuals, or society.

For the purposes of this competition, green energy refers to generating power from natural resources in a way that does not harm the environment by releasing greenhouse gases into the atmosphere. Examples of green energy sources include solar power, wind power, geothermal energy, and hydropower. Energy sources that will not qualify for this prize competition include nuclear power, biomass and biofuel sources, and so-called "clean" coal.

Judges will use the following criteria to assess Design Round submissions:

Criteria	Weight (%)
Alignment of proposed innovation with the competition purpose and challenge statement	40
Potential scalability of the team's approach across the continent of Africa	25
Potential to provide affordable and reliable electricity to energy poor communities, including in rural areas	25
Use of innovative technology to expand green energy access	10
Total	*100*

6.c. Design Round Prizes

At the end of the Design Round, 20 teams will receive $20,000 to design and implement their real-world demonstrations during the Semi-Finalist Round.[3]

7. Semi-Finalist Round

Design Round prize winners proceed to the Semi-Finalist Round, where they will be asked to design a real-world demonstration of their green energy systems innovation.

[3] All prize amounts are in U.S. dollars.

7.a. Semi-Finalist Round Demonstrations

Teams must perform a real-world demonstration (use case) of their innovation and collect quantitative and qualitative data on its results.

In particular, teams will need to demonstrate the ability to deploy distributed green energy solutions that generate at least 60 kWh of off-grid electricity daily (24 hours) using green energy sources.

These demonstrations may be performed wherever the team is headquartered or in any other location around the world. The purpose of the use case is to convince judges that the proposed innovations can be practically and effectively implemented in the real world—and to capture the impacts of these innovations. Teams are responsible for identifying an appropriate site and receiving all proper permissions to execute their demonstration.

In their case study documentation, teams must provide all operating requirements for their demonstrations, including personnel, electricity, water, other consumable or reusable inputs, and waste processing and disposal. Teams must record and report the actual operating costs of their use demonstrations and provide this information to judges. Teams may also submit supporting materials, such as datasets, models, and video or other evidence to judges.

7.b. Semi-Finalist Round Judging

Teams will be judged on the design rigor and execution of their use case in addition to the use case's alignment with the competition purpose and challenge statements.

Judges will use the following criteria to assess Semi-Finalist Round submissions:

Criteria	Weight (%)
Quality of use case demonstration design and alignment with competition purpose	25
Use case demonstration execution and data collection	25
Potential scalability of the team's approach, as informed by use case—with an emphasis on scalability in Africa, particularly in rural areas	25
Potential to provide affordable and reliable electricity to energy poor communities, as informed by the use case	25
Total	*100*

7.c. Semi-Finalist Round Prizes

Based on these criteria, judges will select five (5) teams from the Semi-Finalist Round competitors to proceed to the Finalist Round. These five Finalist teams will receive $70,000 each in additional funding to execute their real-world demonstrations.

8. Finalist Round Submissions and Prizes

8.a. Finalist Round Demonstrations and Final Submissions

Finalists will be required to execute the use case demonstration of their approach, following the designs they submitted during the Semi-Finalist Round. The purpose of the Finalist Round use case is to demonstrate that the proposed innovations can be rapidly scaled and are clearly adapted to conditions on the African continent. As such, these demonstrations must take place in Africa, following guidelines to be determined by judges and the prize organizers.

As in the semi-finalist round, teams will need to design a demonstration that shows their ability to generate at least 60 kWh of off-grid electricity daily (24 hours) using green energy sources. Additionally, during this round, teams should rigorously assess the power generation actually available to their end-users as a basis for a comparison with their solution. Competing teams will be required to provide their methodology and results of these assessments to judges as part of their final submission package.

The final submission package will require teams to present documentation of their second real-world demonstration to judges and to synthesize findings and implications of both test cases. Additional design and/or technical materials may be submitted, but all documents together may not exceed 100 pages. Videos of up to ten minutes may be required. All submissions must be in the same file formats specified for the Design Round.

The Milken-Motsepe Prize team reserves the right to visit all use case locations in-person—or to send designated representatives—and to report back to judges on team execution strategies and performance.

8.b. Finalist Round Judging and Grand Prize

As with the Design Round, judges will assess Finalist submissions against the following criteria:

Criteria	Weight (%)
Alignment of proposed innovation with the competition purpose and challenge statement	10
Potential scalability of the team's approach	40
Potential to provide affordable and reliable electricity from green sources to energy-poor communities, including in rural areas	40
Use of innovative technology to expand green energy access	10
Total	*100*

The judges will award a single $1,000,000 Grand Prize to the Competition Winner. A runner-up prize of $250,000 will also be awarded.

9. Summary of Prize Amounts

Prize Type	Amount
Design Round Prizes	$20,000 for 20 teams
Semi-Finalist Round Prizes	$70,000 for 5 teams
Runner-up Prize	$250,000
Grand Prize	$1,000,000

All prizes will be awarded in U.S. dollars and sent to team bank accounts by wire transfer. Current exchange rates at the time of transfer will apply if receiving account is not dollar-denominated. The decisions of prize judges are final and not subject to appeal.

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