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# Terms of Reference: “Expert to deliver training of trainers on DRE component testing, efficiency, standards and industry/ISO codes”

## 1. Background information

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The Cornerstone of Rural Electrification (CORE) initiative and the Transforming Energy Access Learning Partnership (TEA-LP) are partnering to support graduate-level university trainings on energy access across Sub-Saharan Africa.

**CORE** is an international initiative initiated by the Alliance for Rural Electrification (ARE), International Renewable Energy Agency (IRENA), Sustainable Energy for All (SEforALL), UN Environment Programme (UNEP), United Nations Industrial Development Organization (UNIDO) and International Copper Alliance (ICA). CORE is managed by ARE. CORE’s mission is to enable resilient rural and peri-urban communities by ensuring safety, efficiency and reliability become the cornerstone of decentralised electrification.

**TEA-LP** is a partnership of universities committed to delivering local professionals to drive the transition to sustainable energy access for all. TEA-LP has supported eight universities across Africa to develop new postgraduate curricula, that vary, in discipline and content, across universities, aiming to respond to the market needs of this rapidly growing sector in their respective countries. The new phase of the TEA-LP runs from 2022 until the end of 2025 and will see 20 new universities delivering energy access curricula for Masters’ students across Africa and the Indo Pacific.

In the context of the development of **trainings for graduate level students at the University of Port Harcourt in Nigeria**, CORE is **seeking an expert to deliver a “training of trainers on DRE Component testing, efficiency, standards and industry/ISO codes”**. The training of trainers should take place in **March 2023**.

## 2. Objectives

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The objective of this activity is to support **University of Port Harcourt** to successfully deliver training of graduate students by supporting with training of the university’s trainers.

## 3. Scope of work

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CORE is seeking an expert to develop training materials and deliver the training of trainers for the **University of Port Harcourt** across the following **modules** under the headline **“DRE component testing, efficiency, standards and industry/ISO codes”**

1. Renewable energy system components testing
  - Definition of quality, theories and methodologies for components of energy systems



- Quality testing for solar PV, battery, lamp, charge controller
  - Quality testing for solar thermal component testing (solar dryer, solar cooker, Solar water heater etc)
  - Quality testing for biogas components and product
  - Quality testing of wind turbine materials, blades, gear and vibration/alignment
2. Efficiency, standards and renewable energy industry/ISO codes
- Definitions: system and component energy efficiency, standards and industry codes
  - Formulation, prescription, policy and practices of standards and codes
  - ISO standards/codes for renewable energy materials and consumables
  - ISO standards/codes for energy management and energy savings
  - ISO standards/codes for performance and energy use in the built environment
  - ISO standards and design codes for solar energy (PV and Thermal), wind energy and solid biofuel

The expert delivering the training of energy access trainers should deliver **up to 3 hours of in-person or virtual training per module** for a **total of up to 12 hours of training**.

The trainings will be delivered in **English**.

A final report of **up to two pages** is to be submitted to ARE upon completion of the trainings, including the following:

- **Pre- and post-training** survey results (to trainers participating in the trainings)
- **Number of trainers trained:** monitored before and during training of trainers sessions
- **Number of students/entrepreneurs trained by trainers:** monitored after training of trainers sessions, also monitored on a regular basis (e.g. on a quarterly or half-yearly basis)
- **Number of students/entrepreneurs trained by trainers that gained employment:** Monitored by surveys and direct inquiries to students on (e.g. on a quarterly or half-yearly basis)
- **All of the above is disaggregated into gender-specific data** (e.g. number of female & male students trained, number of women that gained employment)

The deadline for submission of this report is **28 April 2023**.

The selected expert will be required to report on the job situation of the students trained 6, 12 and 18 months after the initial trainings were conducted.

#### **4. Required documents**

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Bidders are required to submit the following documents to Jens Jæger, Director of Policy & Business Development, ARE & Manager, CORE: [j.jaeger@ruralelec.org](mailto:j.jaeger@ruralelec.org)

- a. **Technical proposal** of maximum three pages on the proposed methodology, timeline for delivery of materials and experience of the expert(s) in delivering similar trainings
- b. **Financial proposal** of no more than 1 page (in USD)
- c. **CV** of the expert(s) in format of choice



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## 5. Timeline

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The deadline for submissions of proposals is **13 January 2023 (23:59 CET)**.

The selected expert(s) will be contacted by **late-January 2023**.

The 'training of trainers' sessions should be delivered throughout **March 2023 and at the latest by 31<sup>st</sup> March 2023**.

## 6. Fees

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The selected expert(s) will be paid a service fee for the delivery of the trainings.

The fees quoted in the Financial proposal are all-inclusive and not subject to change.

## 7. Payment schedule

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Payments to the selected expert will be made along the following schedule:

- 25% upon signature of contract
- 25% upon submission of interim report
- 50% upon submission of final report

Payments will be payable within 60 days upon receipt and acceptance of deliverable and invoice (electronic version) indicating the contract number and instalment requested.

