



UNIVERSITY of  
RWANDA

# **MEMORANDUM OF UNDERSTANDING**

**BETWEEN**

**UNIVERSITY OF RWANDA (UR)**

**AFRICA CENTER OF EXCELLENCE IN ENERGY FOR  
SUSTAINABLE DEVELOPMENT (ACE-ESD)**

**AND**

**LUCAS-NÜLLE GMBH**

**January, 2020**

## **MEMORANDUM OF UNDERSTANDING BETWEEN UR / ACE-ESD AND LUCAS-NÜLLE GMBH**

This Memorandum of Understanding (MOU) made and entered into on 24/01/2020 between University of Rwanda (UR) / Africa Center of Excellence in Energy for Sustainable Development (ACE-ESD) hereinafter referred to as "UR/ACE-ESD with its head office in Kigali, Kicukiro district, Rwanda, [www.ur.ac.rw](http://www.ur.ac.rw) P.O.BOX 4285 Kigali, represented by Professor Philip Cotton, the Vice-Chancellor, on one part and Lucas-Nülle GmbH, Siemensstr. 2, 50170 Kerpen, Germany, represented by Lionel Hemme.

### **1. OBJECTIVES OF THE MoU**

The objective of this Memorandum of Understanding is:

- a) To promote interaction between UR / ACE-ESD and Lucas-Nülle GmbH in mutually beneficial areas,
- b) To provide a formal basis for initiating interaction between UR/ACE-ESD and Lucas-Nülle GmbH.

### **2. PROPOSED MODES OF COLLABORATION**

UR/ACE-ESD and Lucas-Nülle GmbH propose to collaborate through:

- a) Sponsoring student projects / fellowships in two year Master course and five year PhD program at UR/ ACE-ESD,
- b) Sponsoring R&D projects, which may be carried out wholly at UR/ACE-ESD or at premises of Lucas-Nülle GmbH or partly at UR/ACE-ESD and partly at Lucas-Nülle GmbH,
- c) Training of ACE-ESD staff and students on laboratory equipment in areas of interest to Lucas-Nülle GmbH,
- d) Any other appropriate mode of interaction agreed upon between UR/ACE-ESD and Lucas-Nülle GmbH.

Each of the above modes of interaction will be initiated by entering into a separate agreement between the two parties.

### 3. FORMS OF RESEARCH AND DEVELOPMENT PROGRAMS

The form of any of the said Research and Development Program will be subject to a separate Research Agreement entered into by the Parties but may also include the following:

- a. In their own existing facilities - The performance of research individually by each Party or concurrently by both Parties in mixed groups at their own facilities with regular exchanges of results,
- b. In a separate research and development facility - The performance of research by the technical personnel of both Parties working together in the facilities of one Party or in mixed groups at the facilities supported/ sponsored by either Party,
- c. Third parties - The performance of research by the Parties together with one or more third parties.

### 4. TECHNICAL AREAS OF COLLABORATION

- a. Energy generation,
- b. Short training of our staff and students from national, regional, and international,
- c. Exchange staff and researchers under our institution in the different research fields,
- d. Short training on laboratory equipment by focusing on different topics namely:
  - i Small wind turbines (off-grid system)
  - ii Wind power plants with doubly fed induction generator (DFIG)
  - iii Generator protection
  - iv Mains synchronization and automatic generator control
  - v High voltage direct current (HVDC) transmission line
  - vi Pump storage power plant
  - vii Bus bar systems
  - viii Fault ride through dynamic grid fault simulation
  - ix Power transmission and protection technology



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- x Storage devices,
- xi Micro grids in islanded mode and connected to the utility grid,
- xii Control strategy of micro grids with different micro sources namely (Photovoltaic arrays, battery, and wind power plant),
- xiii Design and implementation of smart grids,
- xiv Design, Implementation and sustainability Micro-hydro Power and Pico-hydropower plant,
- xv Design and implementation of nanogrids,
- xvi Energy management and loads control strategies

### **5. AGREEMENTS FOR RESEARCH COLLABORATION**

Each research collaboration undertaken by the parties hereunder shall be initiated by the signing of a separate research agreement between the parties, which will describe in detail:

- a) The nature, scope and schedule of the research collaboration,
- b) The form of the research collaboration,
- c) The estimated cost of the research collaboration together with the amount of funding, if any, to be received from third parties.
- d) The treatment of intellectual property and data rights, including patents, industrial design registration, copyrights and all other proprietary information (including innovations not patented, designs not registered etc.) which result from the research collaboration or which belong to a party and are used in research collaboration.
- e) Testing of equipment (Battery testing, converters, solar charge controller testing).
- f) Implementation of microgrids in islanded mode and connected to the utility grid.
- g) Control strategy of microgrids with different microsources namely (Photovoltaic arrays, battery etc.).

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- h) Design and implementation of smartgrids.
- i) Design, Implementation and sustainability Micro-hydro Power.
- j) Energy management and load shedding strategies.
- k) Industrial attachments and internships to students for skills transfer and sustainable development.
- l) Enabling research development and dissemination of findings on indigenous energy sources, consultancy and advisory services both public and private organizations.
- m) Access to energy infrastructure for research promotion and exposure to latest technologies.
- n) Technology and skills transfer for sustainable energy development and management.
- o) Strengthening the cooperation between industry and academia in the training local workforce in renewable energy.

other provisions as may be mutually agreed upon, including provisions covering the consequences of default or termination by a participant, term, arbitration of disputes and applicable law.

### 6. CONFIDENTIALITY

- a. During and for a period of three years (3) from the date of disclosure, each party agrees to consider as confidential all information disclosed by the other party in written or tangible form or, if orally disclosed confirmed in writing within thirty days of disclosure and identified as confidential by the disclosing party.
- b. The obligations above shall not extend to any confidential information for which the receiving party can prove that this information:
  - is in the public domain at the time of disclosure or comes within the public domain without fault of the receiving party.
  - is already known or become known to the receiving party

## **MEMORANDUM OF UNDERSTANDING BETWEEN UR / ACE-ESD AND LUCAS-NÜLLE GMBH**

- is received from a third party having no obligations of confidentiality to the disclosing party,
- is independently developed by the receiving party; or
- is required to be disclosed by law or court order.

### **7. NON-EXCLUSIVITY**

The relationship of the parties under this MOU shall be nonexclusive and both parties, including their affiliates, subsidiaries and divisions, are free to pursue other agreements or collaborations of any kind. However, when entering into a particular research agreement, the participants may agree to limit each party's right to collaborate with others on that subject.

### **8. TERMS AND TERMINATION**

This MOU, unless extended by mutual written agreement of the parties, shall expire in three (3) years after the effective date specified in the opening paragraph. This MOU may be amended or terminated earlier by mutual written agreement of the parties at any time. Either party shall have the right to unilaterally terminate this MoU upon 60 days prior written notice to the other party. However, no such early termination of this MOU, whether mutual or unilateral, shall affect the obligations of the participants under any Research Agreement, Confidentiality clause as referenced in clause 6 above, or any other agreement entered into pursuant to this MOU, which obligations shall survive any such termination.

### **9. RELATIONSHIP**

Nothing in this MoU shall be construed to make either party a partner, an agent or legal representative of the other for any purpose.



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## 10. ASSIGNMENT

It is understood by the Parties herein this MOU is based on the professional competence and expertise of each party and hence neither Party shall transfer or assign this Agreement, or rights or obligations arising hereunder, either wholly or in part, to any third party.

## 11. COSTS OF THE MOU

Each Party shall bear the respective costs of carrying out the obligations under this MOU.

## 12. SIGN IN DUPLICATE

This MOU is executed in duplicate with each copy being an official version of the Agreement and having equal legal validity.

BY SIGNING BELOW, the parties, acting by their duly authorized officers, have caused this Memorandum of Understanding to be executed, effective as of the day and year first above written.

On behalf of

UNIVERSITY OF RWANDA

By :

Name: Prof. Philip Cotton

Title: Vice Chancellor



On behalf of

LUCAS-NÜLLE GMBH

By :

Name : Lionel Hemme

Title : Country Sales Director



# **LETTER OF AGREEMENT**

**Between**

**LUCAS-NÜLLE GMBH (LN)**

**And**

**UNIVERSITY OF RWANDA (UR)**

**January, 2020**

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LETTER OF AGREEMENT Between LUCAS-NÜLLE GMBH (LN) And UNIVERSITY OF RWANDA (UR)

This Letter of Agreement (the Agreement) is entered by and between:

The **UNIVERSITY OF RWANDA**, a public higher learning institution having its head office at KK 737 st Gikondo under which auspice operates the Africa Centre of Excellence in Energy for Sustainable Development (ACE-ESD)

And

**LUCAS-NÜLLE GMBH** supports institutions and projects worldwide with the aim of developing technical-industrial education and training. To this end, the foundation awards its own scholarships to selected individuals and supports educational projects financially or through the provision of training systems. Supporting science is the third pillar of the foundation's work. Its headquarters are located at Siemensstraße 2; 501 70 Kerpen, Germany; Tel.: +49 2273-567 0; Fax: +49 2273 567 30.

**WHEREAS, LUCAS-NÜLLE GMBH** and the **UNIVERSITY OF RWANDA** inspired by the extensive opportunities offered by international co-operation, recognise the need to develop and nurture new partnerships and to share human and material resources, with the aim of promoting international understanding, contribute to the growth of global knowledge and advance the development of our respective countries and world;

**WHEREAS ACE-ESD** is the centre of excellence established within University of Rwanda devoted to address the critical challenge capacity building in the field of energy. The implementation of the ACEESD is expected to result in building capacity of the East and Southern African region through the University of Rwanda, College of Science and Technology to undertake interdisciplinary research and training in smart and micro-grid energy technologies tailored to serve remote and/or rural areas using renewable sources, power systems and energy management and trade policy, and improve research and teaching environment.

**WHEREAS UR** and **LN** signed a **Memorandum of Understanding** on the 24<sup>st</sup> January, 2020, and now want to enter into this specific agreement

**UR** and **LN** are hereinafter referred to as "the Parties" and each of them being "a Party".

Now, therefore, in consideration of the mutual covenants of the Parties hereinafter contained, the Parties agree as follows:

1. **PURPOSE** The parties shall organize and facilitate exchange programmes for faculty staff and students on teaching, scientific research and laboratory attachment as stipulated in the work plan and budgets herein incorporated and in accordance with the terms and conditions contained in this agreement.

## 2. FINANCIAL ASPECTS

The total joint budget fixed for fulfilling the agreed objectives under this agreement is USD \$ 90,000 only. The expenditure and disbursement shall be done in accordance with terms and conditions prescribed in this agreement. Any amendments to the budget shall be subject to written agreement between the Parties.

## 3. GOVERNANCE, ROLES AND RESPONSIBILITIES

3.1 Selection of staff and students for exchange shall be done on mutual agreement between parties on the needs and areas for exchange. The number of staff and students from parties and time for exchange shall be decided upon agreement between parties. Each party shall provide convenience environment for exchange staff and students to facilitate research, learning and be responsible for providing the necessary working place and equipment, library and other basic teaching and research resources as well as guarantee their basic accommodation.

3.2 By virtue of the inter-institutional nature of this agreement, the parties' senior management teams shall commit themselves to the principles and approaches embodied in this Agreement, as well as its requirements and implications, to enable well-informed and supportive decision-making that facilitates its implementation. For purposes of expediting the effective coordination and implementation of the activities covered by this Agreement, the parties shall nominate authorized representatives.

3.3 The parties shall convene regular meetings on agreed frequency and the relevant documentation shall be circulated in advance of the meeting. Meetings will normally take place using ICT, to be cost-efficient, except when a physical meeting is necessary.



LETTER OF AGREEMENT Between LUCAS-NÜLLE GMBH (LN) And UNIVERSITY OF RWANDA (UR)

3.4 The parties shall also agree on the financial management matters, including who should manage the funds on behalf of parties in accordance with the agreed implementation Budget outlined in annex 1. There shall also be joint oversight of the implementation of agreed Annual Action Plan, Milestones and deliverables to be achieved outlined in annex 2. Parties shall prepare the Monitoring and Evaluation plan and agree on indicators that will help to track and measure performance of the project.

3.5 During implementation both parties shall compile the annual implementation report with input from all parties, including reporting against agreed indicators, activity reporting, financial and qualitative reporting. The annual reports must be endorsed and signed off by all parties and the final version published.

3.6 Each year the parties shall review the operation of this Partnership Agreement and revise the specific collaborative activities and commitments for the upcoming year in line with the outcomes of the review.

#### **4. CONFIDENTIALITY**

All information of a confidential nature pertaining to the Agreement and results arising from the Agreement is confidential to the Parties except where disclosure is required under and in terms of the Main Contract. The Parties undertake to hold such information in confidence and not to publish or disclose it in any way other than to persons in their employment who shall likewise be bound by these obligations of confidentiality without the consent of the Party owning or controlling such confidential information.

#### **5. INTELLECTUAL PROPERTY**

Each Party shall own and retain all rights, titles and interests which including but not limited to all inventions, designs, information, specifications, formulae, improvements, discoveries, know-how, data, processes, methods, techniques and the intellectual property rights therein, including but not limited to, patents, copyrights, database rights, design rights (registered and unregistered), trademarks, trade names and service marks, applications for any of the above ("Intellectual Property").



LETTER OF AGREEMENT Between LUCAS-NÜLLE GMBH (LN) And UNIVERSITY OF RWANDA (UR)

Intellectual property rights shall be further defined with respect to each Collaboration Area and shall be included in the relevant Specific Agreement.

**6. AGREEMENT DURATION**

The Agreement shall become effective upon signature by the Authorized officials and will remain in effect for three (3) years, unless modified with the approval of the agreement of the Parties.

**7. DISPUTES**

The partners will make every reasonable effort to resolve all issues fairly by negotiation. In the event that the dispute cannot be resolved within a four week period the matter shall be referred to the leaders of the partner organizations involved, for resolution. Any dispute which cannot be settled amicably shall be finally settled by third party mediation. Each partner shall bear its own costs connected to such a mediation procedure.

**8. FORCE MAJEURE**

If either party hereto is prevented in the performance of any act required hereunder by reason of act of God, fire, flood, or other natural disaster, malicious injury, strikes, lock-outs, or other labour troubles, riots, insurrection, war or other reason of like nature not the fault of the party in performing under this Agreement, then performance of such act shall be excused for the period of the delay and the period of the performance of any such act.

**9. TERMINATION**

The Agreement may be terminated by either party upon a prior three months written notice to the other party,

LETTER OF AGREEMENT Between LUCAS-NÜLLE GMBH (LN) And UNIVERSITY OF RWANDA (UR)

10. SIGNATURES

In witness whereof, the parties to this Agreement through their duly authorized representatives have executed this Agreement on the days and dates set out below, and certify that they have read, understood, and agreed to the terms and conditions of this Agreement as set forth herein.



For UNIVERSITY OF RWANDA

Name: Prof. Philip COTTON OBE

Title: Vice Chancellor

Date: 24/01/2020



for LUCAS-NÜLLE GMBH (LN)

Name: Lionel HEMME

Title: Country Sales Director

Date: 24/01/2020



**APPENDICES****1. Joint Budget for Partnership Implementation between ACE-ESD and LUCAS-NÜLLE GMBH (LN) (Cost in USD \$)**

S/N	Activity	2020		2021		2022		Total
		ACE-ESD	LUCAS-NÜLLE GMBH	ACE-ESD	LUCAS-NÜLLE GMBH	ACE-ESD	LUCAS-NÜLLE GMBH	
1	Student internships (students exchange )	10,000		10,000		10,000		30,000
2	Industry attachments (staff exchange )	10,000		10,000		10,000		30,000
3	Research cost Consumable	5,000		5,000		5,000		15,000
4	Training cost	5,000		5,000		5,000		15,000
	Sub-Total	30,000		30,000		30,000		90,000
	Total							90,000






**2. Joint Work Plan between ACE-ESD and LUCAS-NÜLLE GMBH (LN)**

Activity	Sub-Activities	2020				2021				2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
S/N 1-4 (Previous table)	Establishing criteria for students/staff selections												
	Identification of students/staff for internship and attachments												
	Students/staff internship and attachments												
	Joint students/staff supervision/project												
	Joint Evaluation of students/staff performance during the entire internship/attachment												

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