

Center Title and Acronym: Africa Center of Excellence in Energy for Sustainable Development (ACE-ESD)

Host University and Country: University of Rwanda, College of Science and Technology (UR-CST)

Center Website Address: aceesd.ur.ac.rw

Center Director and email address: Prof. Ntagwirumugara Etienne, etienne.ntagwirumugara@gmail.com

Primary Thematic Discipline of Center: Renewable Energy, Electrical Power Systems, Energy Economics both Master and PhD levels

Brief Description of Center:

The Africa Centre of Excellence in Energy for Sustainable Development (ACE-ESD) was established to address the critical challenge of 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 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, train 40 PhD and 120 MSc energy experts and improve research and teaching environment. The regional center offers post-graduate training, organization of short professional courses and PhD in collaborative applied research in Energy for Sustainable Development.

Key Objectives and Expected Outcomes:

Strengthen Education Capacity, excellence, – quality, and productivity

Strengthen Education Capacity & Development Impact

Strengthen excellence in Research Capacity

Strengthen education and research capacity through increased financial sustainability and demonstration of value to students and partners

Expected outcomes

Transform an existing Renewable Energy Master's program at the UR-CST and develop new specialized graduate programs

Strengthen Education Capacity excellence – quality and productivity.

Obtain international accreditation for at least one new specialized graduate program.

Train 40 PhD and 120 Master students, of which 30% would be regional and 30% female

Train 80 practitioners and policy-makers through short term courses, of which 30% would be regional and 30% female

Establish a modern well-equipped laboratory and provides micro-grid research laboratory in partnership with Colorado State University.

Improved research and teaching environment through high performance computing unit and e-learning platform.

Major Accomplishments to Date:

1. Institutional readiness (Administrative and academic staff have been placed) Office materials, equipment and stationaries have been purchased). Build administrative support team for ACEESD
2. Curriculum development of 3 new master's programs (Waiting for the approval of new master's programs by HEC)
3. 32 PhD students from 10 different countries admitted and have got acceptance letters to start on the 30 th October 2017. Approval of 3 Masters Programs in i) Renewable energy, ii) Power systems and iii) Energy Economics has been accepted at UR senate level and was sent to High Council for the approval.
4. 7 PhD students registrar from January 2017.

Primary Regional and Global Partners:

- Rwanda Utility Regulatory Authority
- Rwanda Energy Group
- Colorado State University, USA
- Great Lakes Energy Ltd.
- Barefoot Power Rwanda Ltd.
- Ngali Energy Ltd, Rwanda
- Carnegie Mellon University, Rwanda (CMU-R)
- Makerere University, (Uganda)
- The Nelson Mandela Africa Institution of Science and Technology (Tanzania)
- Addis Ababa Institute of Technology (Ethiopia)
- University of Agder, Norway
- National Industrial Research and Development Agency (NIRDA)
- Tubitak Marmara Research Center Energy Institute (Turkey)
- Chalmers University of Technology (Sweden)
- KTH University (Sweden)
- Global Energy Interconnection Development and Cooperation Organization (China)

Senior Faculty	Email Address	Research Area
Prof. Ntagwirumugara Etienne	etienne.ntagwirumugara@gmail.com	Electrical Systems Engineering, Renewable Energy, Energy trade and policy, Electronics & Telecommunication
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