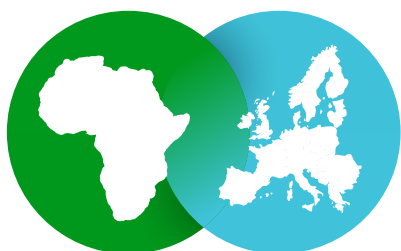




PILLAR 1



LEAP-RE

Long-Term Joint EU-AU Research
and Innovation Partnership on Renewable Energy

RESULTS OF THE LEAP-RE CALL FOR PROPOSALS

**13 PROJECTS WERE SELECTED FOR FUNDING
VIA THE LEAP-RE CALL FOR AU-EU COLLABORATIVE
RESEARCH AND INNOVATION PROJECTS ON RENEWABLE ENERGY**



This project has received funding from the European Commission's Horizon 2020 Research and Innovation Programme under Grant Agreement n°963530.

WARNING

The project proposals listed in this document are recommended for funding to the national/regional research funding organisations of LEAP-RE by the LEAP-RE's ***Pillar 1 Call 2021 Steering Committee***.

Important: The actual funding of the projects depends on the successful completion of the contract negotiations at the national/regional level.



CONTEXT

In January 2021, the LEAP-RE programme launched a '**Call for AU-EU Collaborative Research and Innovation projects on Renewable Energy**'. The Call resulted in 124 applications being received from candidates including companies, non-profit associations, research labs, foundations and more from 38 African and European countries. 36 pre-proposals were pre-selected, 32 were submitted, and 13 proposals were finally selected for funding.

The 13 proposals were chosen after a year-long selection process, involving an international review panel and a coalition of funding agencies from within the LEAP-RE consortium. By selecting these project proposals for funding, LEAP-RE strengthens its support to the development of renewable energy sources in order to address both climate change and the need for electrification, two of the biggest challenges Africa faces today.

The LEAP-RE programme started in 2020 with the ambition to develop innovation in the field of renewable energy and to strengthen research cooperation between the European Union (EU) and the African Union (AU). It aims to increase the use of renewable energy via a well-balanced set of research, demonstration, and technology transfer projects in both continents.

Within its 'Pillar 1', the LEAP-RE programme implements transnational proposals for research, innovation and capacity building that are co-funded by 16 African and European national funding organisations members of the LEAP-RE consortium, and the European Commission.

Selected project proposals will receive a global funding of €10.35 million. They include a total of 83 partners from 8 European countries (Belgium, France, Finland, Germany, Portugal, Romania, Spain, UK) and 9 African countries (Algeria, Egypt, Ethiopia, Morocco, Mozambique, Nigeria, South Africa, Togo, Tunisia).

COORDINATION OF THE LEAP-RE PROGRAMME

COORDINATION OF PILLAR 1



MEMBERS OF LEAP-RE PILLAR 1





RENEWABLE ENERGY RESOURCES, MAPPING AND MODELLING

● OASES

Development and Demonstration of a Sustainable Open Access AU-EU Ecosystem for Energy System Modelling

Project coordinator:

Jan Dobschinski, Fraunhofer Institute for Energy Economics and Energy System Technology, **Germany**.

Project partners:

Centre de Développement des Energies Renouvelables - CDER, and CEREFEE1 (**Algeria**), Helwan University (**Egypt**), VTT (**Finland**), Fraunhofer Institute for Energy Economics and Energy System Technology, and University of Kassel (**Germany**), Council for Scientific and Industrial Research - CSIR, and University of Venda (**South Africa**).



END OF LIFE AND SECOND LIFE MANAGEMENT OF RENEWABLE ENERGY COMPONENTS

● RESTART

Recycling of spent li-ion batteries and end-life photovoltaic panels: from the development of metal recovery processes to the implementation of a start-up

Project coordinator:

Cadi Ayyad University (UCA), **Morocco**

Project partners:

King Salman International University (**Egypt**), Aalto University (**Finland**), Centre Européen de Recherche et d'Enseignement en Géosciences de l'Environnement - CEREGE (**France**), Cadi Ayyad University, Mohammed VI Polytechnic University - UM6P, and Green Energy Park (**Morocco**), Babeş-Bolyai University (**Romania**).

● SIREVIVAL

Si-based devices for renewable energy: From end of life recycling to revival of photovoltaic modules

Project coordinator:

Sorin Melinte, Université catholique de Louvain, **Belgium**

Project partners:

Centre de Recherche en Semi Conducteur pour l'Energétique -CRTSE (**Algeria**), Université catholique de Louvain (**Belgium**), Institut d'Electronique, de Microélectronique et de Nanotechnologie - IEMN (**France**), École nationale supérieure d'ingénieurs de Tunis, and Centre de Recherche et des Technologie de l'Energie - CRTEn (**Tunisia**).





CLEAN COOKING AND BIOMASS TRANSFORMATION

● SoCoNexGen

Solar Indoor Cooking Systems of the Next Generation

Project coordinator:

Cristiano Teixeira Boura, Aachen University of Applied Sciences, **Germany**

Project partners:

Centre de développement des énergies renouvelables - CDER (**Algeria**), Aachen University of Applied Sciences, Ingenieurbüro für Energie und Umwelttechnik, and low-tec gGmbH (**Germany**), Universidade de Évora (**Portugal**), Université Mohammed Premier Oujda (**Morocco**), Université de Tunis El Manar- UTM (**Tunisia**).

● SOLAR INDUCE

SOLAR INDUCEed domestic clean efficient cooking and refrigeration for off-grid applications in Africa

Project coordinator:

Jose Ignacio Mujika Odriozola, COPRECI S Coop, **Spain**

Project partners:

The British University in Egypt (**Egypt**), Enugu State University of Science and Technology, S&P Global Resources Nigeria Limited (**Nigeria**), Tshwane University of Technology, and Walter Sisulu University (**South Africa**), COPRECI S Coop (**Spain**), University of Northumbria, (**UK**).

● PyroBioFuel

Sustainable biomass conversion into bioenergy through pyrolysis

Project coordinator:

Fatma Ashour, Cairo University, **Egypt**

Project partners:

Cairo University, (**Egypt**), Ibn Tofail University - Research Institute for Solar Energy and New Energies (IRESEN), (**Morocco**), Uni. Witwatersrand (**South Africa**), Brandenburg University of Technology (**Germany**), CNRS PIMM (**France**).

● SunGari

A modern solar cooking solution for African staples

Project coordinator:

Aditya Parmar, Natural Resources Institute, University of Greenwich, **UK**

Project partners:

University of Kassel, and Simply Solar Technology Consulting GbR (**Germany**), University of Pretoria, and University of Limpopo (**South Africa**), University of Lome (**Togo**), University of Greenwich (**UK**).



NEW RENEWABLE ENERGY RESOURCES FOR AFRICA

HyAfrica

Towards a next generation renewable energy source – a natural hydrogen solution for power supply in Africa

Project coordinator:

Julio Carneiro, CONVERGE, Lda, **Portugal**

Project partners:

Leibniz Institute for Applied Geophysics, and Fraunhofer Institute for Energy Economics and Energy System Technology (**Germany**), University Mohammed Premier (**Morocco**) Eduardo Mondlane University, and National Directorate of Geology and Mines (**Mozambique**), CONVERGE, Lda, (**Portugal**), University of Pretoria, and University of Limpopo (**South Africa**), University of Lomé (**Togo**).



NEW, MORE EFFICIENT PV CELLS AND COMPONENTS

QDSOC

Environmentally friendly colloidal quantum dots for high performance solar cells

Project coordinator:

Raphaël Schneider, Université de Lorraine, **France**

Project partners:

University of Liege (**Belgium**), Université de Lorraine (**France**), Mohammed V University in Rabat (**Morocco**), University of the Witwatersrand (**South Africa**).

NANOSOLARCELL

Integration of photonic conversion layers based on photoemissive nanostructured materials for improving sunlight harvesting ability of solar cells

Project coordinator:

Conchi Ania, CNRS-CEMHTI, **France**

Project partners:

Unité de Développement des Equipements Solaires - UDES (**Algeria**), MU-EG, (**Egypt**), CNRS-CEMHT (**France**), Cadi Ayyad University (**Morocco**), Gheorghe Asachi Technical University of Iași (**Romania**).





PRODUCTIVE USES AND NEW APPLICATIONS OF SOLAR ENERGY

MG-FARM

Smart stand-alone micro-grids as a solution for agriculture farms electrification

Project coordinator:

Serge Pierfederici, Université de Lorraine, **France**

Project partners: Université de Tlemcen, and CDER-UDES (**Algeria**), IECORP SA, and Université de Lorraine (**France**), TUB-WIP (TU Berlin), TUB-EET (TU Berlin), and MicroEnergy International GmbH (**Germany**), Ecole Nationale des Sciences Appliquées d'Oujda, IRESEN-Green Energy Park, and International University of Rabat (**Morocco**).

LEDSOL

Enabling clean and sustainable water through smart UV/LED disinfection and SOLar energy utilization

Project coordinator:

Irina G. Mocanu, Centrul IT pentru Stiinta si Tehnologie, **Romania**

Project partners:

Unité de Développement des Equipements Solaires / EPST Centre de Développement des Energies Renouvelables (UDES / EPST- CDER) (**Algeria**), Institut für Sozialforschung und Sozialwirtschaft e. V. - ISO (**Germany**), Tampere University (**Finland**), Centrul IT pentru Stiinta si Tehnologie (**Romania**), University of Lomé, (**Togo**).

SolCharge

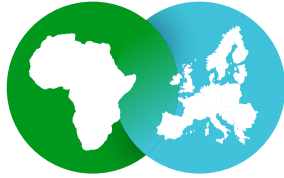
Decentralized Solar Charging System for Sustainable Mobility in rural Africa

Project coordinator:

Markus Lienkamp, Technical University of Munich, **Germany**

Project partners:

Adama Science and Technology University (**Ethiopia**), Commissariat à l'énergie atomique et aux énergies alternatives - CEA (**France**), Technical University of Munich, (**Germany**), Stellenbosch University (**South Africa**).



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