Disclaimer: This document does not present a draft of the Green Deal call to be part of the Horizon 2020 work programme update, nor any future position of the European Commission. It aims to support the development of the call and its content is subject to change.

Title: Accelerating the green transition and energy access Partnership with Africa

Specific challenge:

As recognised in the Joint Communication for a Comprehensive Strategy with Africa (adopted on 9/3/2020), innovation is key to enable African countries to pursue sustainable pathways to development through a low-carbon, climate resilient and green growth trajectory, leapfrogging fossil fuel based and inefficient technologies. The present R&I Partnership on Climate Change and Sustainable Energy of the EU/AU High-Level Policy Dialogue on Science, Technology and Innovation is expected to strongly contribute to Action 1 of the Comprehensive Strategy with Africa.

The African continent has an enormous renewable energy potential that it has just began to successfully harness. The adoption of innovative, affordable, efficient and renewable energy solutions will support Africa achieving sustainable development growth and economic transformation. This will also help Africa addressing the urgency of climate change actions and mitigating its effects.

As Africa still faces major challenges related to (ensuring access to sustainable energy for all, and the development of its industrial base to create much needed jobs. In line with the Africa-Europe Alliance for sustainable investment and jobs, the EU-AU R&I Partnership on Climate Change and Sustainable Energy wants to support the development of sustainable energy solutions adequate to the African context that would address those challenges.

Experience has shown that existing innovative solutions and technologies developed for developed markets need to be adapted, tailored and demonstrated to the multi-faceted context of Africa to bring not only economic, but also environmental and health benefits. For facilitating market uptake and sustained deployment of technologies, R&I policies need to be coupled with capacity building and appropriate financing solutions. Additional considerations towards affordability, distribution channels as well as meaningful engagement of civil society in the implementation of research proposals are also key for the success of possible technology solutions. Attracting private investors towards sustainable energy solutions will contribute to a sustainable economic development benefitting both continents.

Significant efforts are being made (including with the support of the European Commission) to address the development of innovative solutions through research and innovation actions; however, demonstrations of the value of these solutions are still needed.

Scope:

The proposals to be funded under this topic will cover the demonstration of innovative climate adaptation, climate mitigation and sustainable energy solutions, in the African social, economic and environmental contexts. The solutions could address developments in the areas of renewable energy sources and their integration into existing energy system, energy efficiency in particular in urbanised contexts, the water-energy-food nexus, with the aim of providing sustainable energy access (electricity/cooking) or creating economic wealth and jobs (productive use of energy/energy efficiency).

Beside the activities related to the design, construction, commissioning and operation of the demonstration installation, the proposals are expected to develop and implement a tailored value chain approach, identifying the most suitable manufacturing value chains, on the basis of the local context, local material supply chain, local workforce with the objective to assure local sustainable economic development. The latter should also include the identification of technical, vocational and educational needs of the workforce and propose relevant training and qualification activities. The proposals are also expected to define its market strategy and its business strategy to ensure a quick and viable commercial take up of the technological solution demonstrated.

Proposals shall include a life cycle analysis showing the impacts of the proposed solutions on the environment, on climate change targets, and on the social and the economic dimensions, from a cradle to grave viewpoint. Where relevant, proposals will consider adopting a circular economy approach, aligned with the EU Green Deal priorities.

In addition, proposals will need to demonstrate the benefits of the proposed solutions with particular regard to the Sustainable Development Goals 4, 5, 7, 8, 11, 12, 13.

Funded proposals will participate and contribute to the EU/AU Partnership on Climate Change and Sustainable Energy.

Expected impacts:

The short-term impact of the proposals will be to provide evidence of technological reliability, economic viability, and of the environmental, climate, social and economic impacts of its

renewable energy solutions. They are expected to contribute to the strengthening of the joint EU-AU Climate Change and Sustainable Energy Partnership efforts, with emphasis of improving the visibility of EU Science Diplomacy actions in Africa.

The medium term impact will be in the creation of new markets opportunities for both European and African companies in the African continent and technological uptake to accelerate the achievements of the targets of the Paris Agreement for both continents, in line with Europe's Green Deal ambition of climate neutrality, and its external dimensions.

Economic growths and job creation, both in the EU and in African third countries are also expected in the longer term.