



## **Understanding the implications of the energy transition on African economies: Economy and Jobs**

### **1. *Submitting organization:***

African Climate Policy Center of the United Nations Economic Commission for Africa, in association with 4SightEngage (PTY) LTD

### **2. *Short description of the study:***

The proposed case study builds on existing work from a project funded by the African Climate Foundation (ACF) and implemented by the African Climate Policy Center of the United Nations Economic Commission for Africa (UNECA) on understanding the implications of the energy transition on African economies. The ACF-UNECA case study, considered the implication of the energy transition on a wide range of aspects which included the economy, trade, mitigation, finance and jobs.

The case study with the KCI therefore builds on the ACF-UNECA work, and specifically responds to the questions of, (i) what are the job implications of the different energy technologies? (ii) what can we deduce from economic value implications on economic diversification options and inclusion? (iii) what are the implications for trade and finance?

The case study will take the form of a modelling exercise, followed by an analysis based on model outputs, and present general policy recommendations/policy options that enhance/optimize sustainable development outcome for African countries. The case study covers a number of technologies reflected in NDCs of African sample countries, which include coal, wind, solar, hydropower, geothermal.

Building on the ACF-UNECA study, the case study will explore different local content scenarios of the various energy technologies (30 and 60%); construction outputs compared to operation and maintenance. The model outputs to be analysed towards the case study questions are, number of jobs and the associated earnings; output and value added, with a view of understanding job and economic implications.

### **3. *Geographical Region:***

The case study is built on an analysis of 5 African economies, viz. Republic of Botswana, Kingdom of Eswatini, Republic of Equatorial Guinea, Democratic Republic of Congo, and Republic of Ghana. The countries formed part of the selection for the ACF-UNECA project, as such the KCI case study seeks to advance that work,

The selection of the countries is based on the diversity of their relationship with energy technologies, with a view of covering predominant technologies that can lead to generic African perspectives. The case study can therefore be seen as African-wide.

### **4. *Area of climate policy:***

Renewable energy;



**5. *Short description of the policy(ies):***

The case study analyses energy policies/commitments of the case study countries. As such analysis is based on the country's energy plans and/or their Nationally Determined Contributions communicated by March 2024.

**6. *Work programme Area to be covered by the Study:***

Just transition of the workforce and creation of decent work and quality jobs ; Assessment and analysis of the impacts of the implementation of response measures (with a view to understanding the positive and negative impacts);

**7. *If the case study will cover assessment and analysis of the impacts of the implementation of response measures, the impacts to be studied:***

Social; Economic;

**8. *If the case study will cover assessment and analysis of the impacts of the implementation of response measures, the type of assessment (Qualitative/Quantitative/Both):***

Both

**9. *If the case study will cover assessment and analysis of the impacts of the implementation of response measures, the methodology or tool used for impact assessment:***

The case study will be based on the Input-Output model of the US National Renewable Energy Laboratory model JEDI . The model is open source, and can be parameterised for any country, based on relevant energy technologies being considered in the transition. Post the case study, in-country capacity building is possible for any country to run the model for different policy scenarios as an evidence-base in policy-making tool.

**10. *Status of proposed case study:***

Case study is in progress or partially completed and will be continued in collaboration with the KCI

**11. *If the case study is completed and published, link to the case study:***

Not published yet, but the Draft Report can be made available on request.

**12. *Elaboration on how the submitter would contribute to the development of the case study:***

The case study is partially completed for a different purpose, further work with the KCI will include (i) further improvements in the input data (ii) customised analysis for areas relevant to the KCI functions. A limited budget will be required for the further work in collaboration with the KCI.