



Cluster 5 : Focus appels UE-Afrique

Draft déc. 2020

HORIZON-CL5-2021-D3-02-01: AU-EU Water Energy Food Nexus

RIA - TRL 4

Budget AAP : 5M€

Budget/projet : env. 2,5M€

Deadline : 5/01/2022

Expected Outcome

- Reinforce the activities in the long term **the AU-EU HLPD** CCSE Partnership
- Provide knowledge and scientific modelling as evidence base of the water-energy-food-nexus including the envir., social and eco. trade-offs to contribute to R&I strategy and policy making
- Increase clean energy generation in the **African** energy systems
- A perenne network of African experts and expertise in this area
- Improve in the long-term governance to advance knowledge and scientific modelling of the water energy food nexus including the environmental, social and economic trade-offs

Scope

- Contribute to the activities of the **AU-EU High Level Policy Dialog** (HLPD) Climate Change & Sustainable Energy (CCSE) partnership
- Develop & test models for decision makers & planners to implement energy infrastructures & energy supply in Africa
- Promote the highest standards of transparency in model adoption, going beyond documentation and extending to aspects such as assumptions, architecture, code and data...



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HORIZON-CL5-2022-D3-01-05: Demonstration of innovative plug-and-play solutions for system management and renewables storage in off-grid applications

IA - TRL 8
Budget AAP : 10M€
Budget/projet : env. 10M€
Deadline : 23/02/2022

Expected Outcome

- Advance the European innovative knowledge basis, techno. base, techno. leadership in the area of renewable energy-based off-grid energy systems, while creating evidence for policy making in the context of off-grid energy systems
- Improve environmental & socio-economic sustainability of the renewable-energy off-grid systems, particularly on geographic energy islands and/or in **Africa and/or Central Asia**
- Technology de-risk through prototype demonstration tested and validated in operational environment...
- Reinforce the European EU scientific and innovation basis through international collaboration on off-grid energy systems while increasing the potential to export European renewable energy technologies and ensuring political priorities

Scope

Demonstration of innovative plug & play solutions for system management & renewables storage in off-grid applications, which allow for increase of renewables penetration for electricity and heating/cooling & are deployable under different climatic conditions, while also addressing cost-effectiveness, energy poverty & security of supply and by promoting prosumer renewable energy in off-grid cities & communities (including on geographic islands).



Cluster 5 : Focus appels UE-Afrique

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HORIZON-CL5-2022-D3-02-02: AU-EU Energy System Modelling

RIA

Budget AAP : 5M€

Budget/projet : env. 2,5M€

Deadline : 27/10/2022

Expected Outcome

- Reinforce the activities in the long term the **AU-EU HLPD CCSE Partnership**;
- Provide knowledge and scientific energy system modelling as evidence base including the environmental, social and economic trade-offs to contribute to R&I strategy and policy making;
- Increase clean energy generation in the **African energy systems**;
- A permanent network of African experts and expertise in this area.

Scope

- Contribute to the activities of the **AU-EU HLPD CCSE Partnership** ;
- Develop & test models for decision makers and planners to design and evaluate energy system(s) with a high penetration of renewable energy systems in African countries through a regional approach;
- Promote the highest standards of transparency in model adoption, including assumptions, architecture, code and data;
- Disseminate the outcome of the project & all the source codes of the whole model (to stimulate future development);
- Identify further local training needs ; create synergies and cross-fertilisation...



Cluster 5 : Expected impacts des calls

« Renewables Energy technologies & solutions »

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HORIZON-CL5-2021-D3-02-01
HORIZON-CL5-2022-D3-01-05
HORIZON-CL5-2022-D3-02-02

The **main impacts** to be generated by **topics** targeting the **renewable energy technologies & solutions** are :

1. **Disruptive** renewable energy and renewable fuel technologies and systems will be available in 2050 in order to **accelerate the replacement of fossil-based energy** technologies.
2. **Reduced cost** and **improved efficiency** of renewable energy & renewable fuel technologies and their value chains.
3. **De-risking** of renewable energy & fuel technologies with a view to their commercial exploitation & net zero greenhouse gas emissions by 2050.
4. **Better integration** of renewable energy and renewable fuel-based solutions in energy consuming sectors.
5. **Reinforced EU scientific basis** and EU export potential for renewable energy technologies through international collaboration (notably with Africa in renewable energy technologies and renewable fuels and enhanced collaboration with Mission Innovation countries).
6. **Enhanced sustainability** of renewable energy & renewable fuels value chains, taking fully into account social, economic and environmental aspects in line with the European Green Deal priorities.
7. **More effective market uptake** of renewable energy & fuel technologies.