



CIREG

Climate Information for Integrated
Renewable Electricity Generation

An overview

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2.-3. October 2018, Stakeholder Workshop, Niamey



Project duration: 02/2018 to 01/2021



Purpose of the meeting

- Establish first contacts between you and CIREG
- Introduction of the CIREG project (~1.5h)
- User and demand-driven approach
 - Discuss **factors that may hamper the deployment** of renewable sources for electricity generation in West Africa
 - **Identify knowledge gaps** – how can we help to overcome those?
 - Identify the need for „**climate services**“



Purpose of the meeting

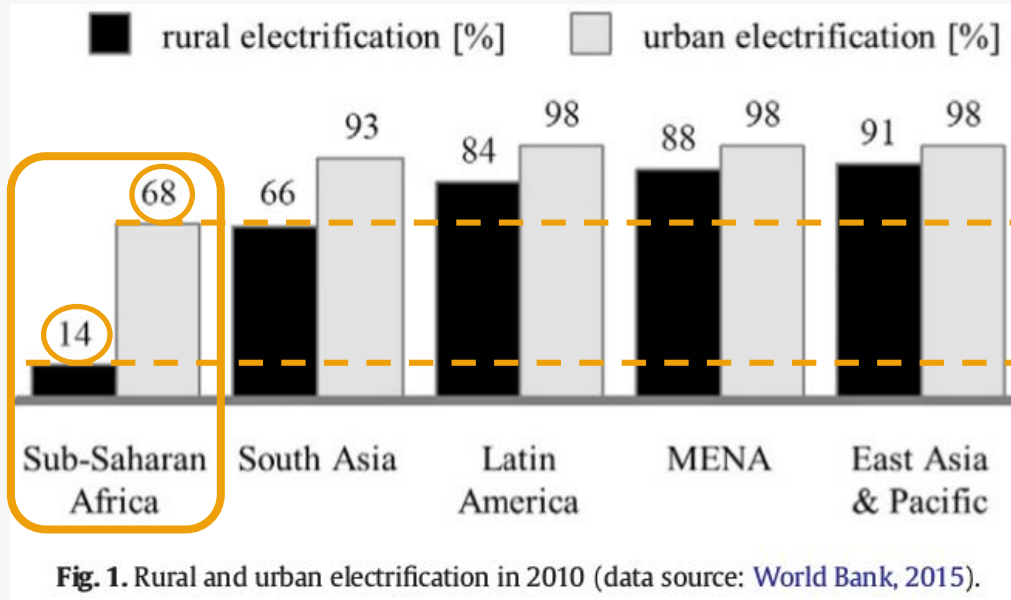
- Establish first contacts between you and CIREG
- Introduction of the CIREG project (~1.5h)
- User and demand-driven approach

We want to go home with a better understanding of where to focus our efforts on!



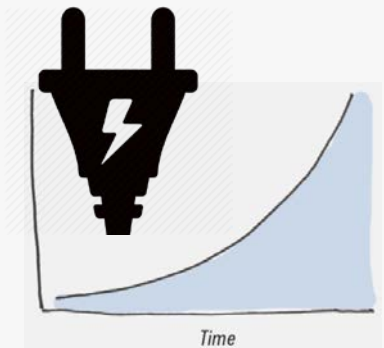
Motivation

Access to electricity



The population in West Africa is projected to double by 2050!

Electricity demand will increase fivefold within the next 10-15 years!





CIREG's overall goal



- To inform and influence the decisions that are taken in the **energy sector** in West Africa today
 - **Substantial long-term impacts** on sustainable development, GHG emissions, energy prices...



- Facilitate the **skipping of the fossil fuel era** in West Africa by supporting the **leap frogging on renewable technologies**



- Decentralized electrification systems in rural areas
- Considering national and regional electricity planning



Modelling & Simulation

- **Simulation of REG potentials (current & future)**
 - Solar, wind, small to large-scale hydropower
 - Seasonal and diurnal supply potentials
 - Complementarity of hybrid electrification systems
 - Using state-of-the-art climate projections and impact models



Scales

- Subcontinental
- River basins
 - Niger, Volta, Mono
- Countries
 - Niger, Burkina Faso,
 - Togo, Ghana
- *Local case studies*

(REG=Renewable Electricity Generation)



Modelling & Simulation

- **Scenarios of future demands**
 - Participatory scenarios to assess future electricity demands
 - Socio-economic development, demographic change
 - Considering national development plans
 - Considering seasonal and diurnal demand profiles
- **Provide freely available simulations of high temporal resolution (sub-daily, daily, monthly)**

(REG=Renewable Electricity Generation)



Climate services (CIREG context)



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- Easily accessible, timely, and decision-relevant scientific **information about climate change and variability and mitigation and adaptation**
- **Translation and transfer of climate knowledge**, including knowledge for understanding climate variability and change and their impacts
- **Co-development**, reflecting demands of stakeholders
- Discover **opportunities** related with climate change



Policy and decision-making

- **Provide quantitative and qualitative policy support**
 - Based on REG modelling and **insights from local cases**
 - Develop **individual business models** for small-scale decentralized systems
 - Analyse legal adjustments to support transition pathways towards REG, economic incentives...
 - Analysing trade-offs and synergies of different REG options
- **Theoretical and methodological framework for innovation policies**
 - Aligning renewable electricity deployment with Sustainable Development Goals (SDGs)

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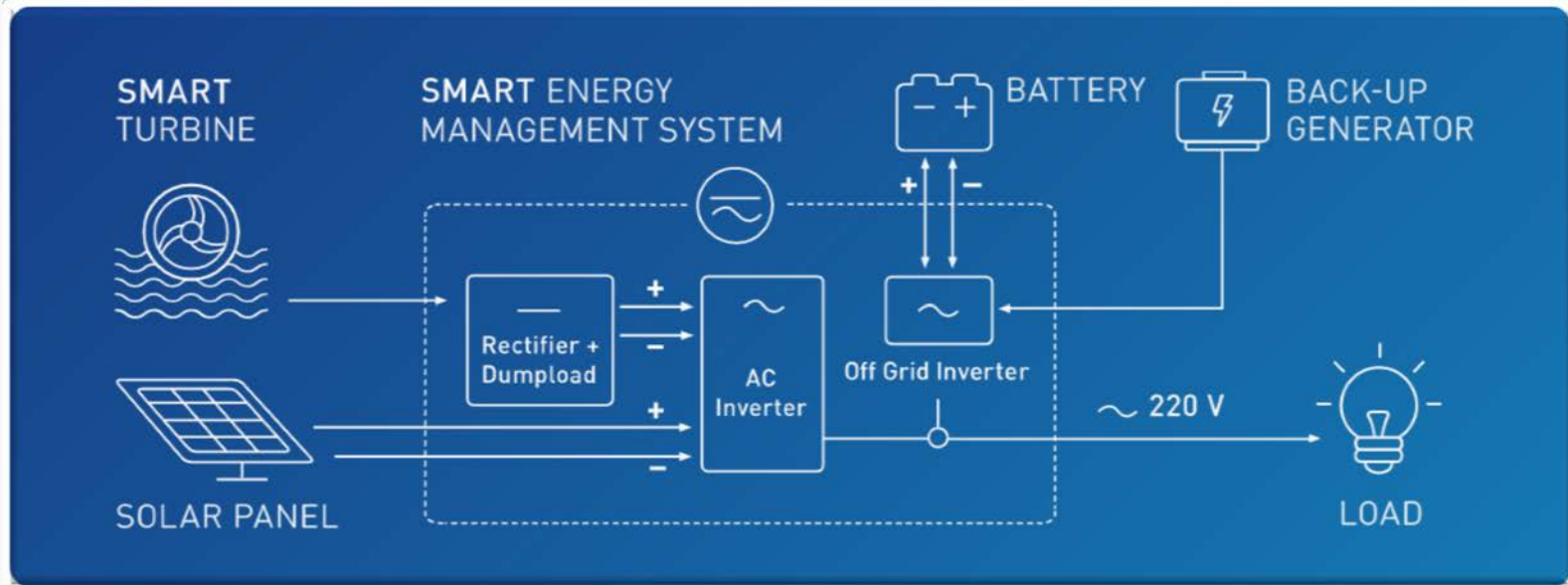
WASCAL demonstrator PV water pumping

Off-grid PV-based water pumping system installed at Sékoukou by WASCAL-CCE program in 2017





Hybrid REG Demonstrator (Togo)






CIREG Homepage (https://cireg.pik-potsdam.de/)

CONTACT

CIREG Climate Services Downloads

 **CIREG**
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„In rural Sub-Saharan Africa, about 86% of the population has no access to electricity. Where West Africa’s population is projected to double by 2050, **the electricity demand is expected to increase fivefold by 2030**“

IRENA, 2015

[Learn more about CIREG](#)

Windows taskbar: 14:03, 30.09.2018

Consortium partners



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Thank you very much for your attention!

